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(54) Title: **NOVEL NUCLEIC ACIDS AND POLYPEPTIDES**

(57) Abstract: The present invention provides novel nucleic acids, novel polypeptide sequences encoded by these nucleic acids and uses thereof.

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NOVEL NUCLEIC ACIDS AND POLYPEPTIDES

1. TECHNICAL FIELD

The present invention provides novel polynucleotides and proteins encoded by such
5 polynucleotides, along with uses for these polynucleotides and proteins, for example in
therapeutic, diagnostic and research methods.

2. BACKGROUND

Technology aimed at the discovery of protein factors (including *e.g.*, cytokines, such as
10 lymphokines, interferons, circulating soluble factors, chemokines, and interleukins) has matured
rapidly over the past decade. The now routine hybridization cloning and expression cloning
techniques clone novel polynucleotides "directly" in the sense that they rely on information
directly related to the discovered protein (*i.e.*, partial DNA/amino acid sequence of the protein in
the case of hybridization cloning; activity of the protein in the case of expression cloning). More
15 recent "indirect" cloning techniques such as signal sequence cloning, which isolates DNA
sequences based on the presence of a now well-recognized secretory leader sequence motif, as
well as various PCR-based or low stringency hybridization-based cloning techniques, have
advanced the state of the art by making available large numbers of DNA/amino acid sequences
for proteins that are known to have biological activity, for example, by virtue of their secreted
20 nature in the case of leader sequence cloning, by virtue of their cell or tissue source in the case of
PCR-based techniques, or by virtue of structural similarity to other genes of known biological
activity.

Identified polynucleotide and polypeptide sequences have numerous applications in, for
example, diagnostics, forensics, gene mapping; identification of mutations responsible for
25 genetic disorders or other traits, to assess biodiversity, and to produce many other types of data
and products dependent on DNA and amino acid sequences.

3. SUMMARY OF THE INVENTION

The compositions of the present invention include novel isolated polypeptides, novel
30 isolated polynucleotides encoding such polypeptides, including recombinant DNA molecules,
cloned genes or degenerate variants thereof, especially naturally occurring variants such as allelic
variants, antisense polynucleotide molecules, and antibodies that specifically recognize one or more
epitopes present on such polypeptides, as well as hybridomas producing such antibodies.

The compositions of the present invention additionally include vectors, including expression vectors, containing the polynucleotides of the invention, cells genetically engineered to contain such polynucleotides and cells genetically engineered to express such polynucleotides.

5 The present invention relates to a collection or library of at least one novel nucleic acid sequence assembled from expressed sequence tags (ESTs) isolated mainly by sequencing by hybridization (SBH), and in some cases, sequences obtained from one or more public databases. The invention relates also to the proteins encoded by such polynucleotides, along with therapeutic, diagnostic and research utilities for these polynucleotides and proteins. These nucleic acid sequences are designated as SEQ ID NO: 1-8051. The polypeptides sequences are designated SEQ
10 ID NO: 8052-16102. The nucleic acids and polypeptides are provided in the Sequence Listing. In the nucleic acids provided in the Sequence Listing, A is adenosine; C is cytosine; G is guanine; T is thymine; and N is any of the four bases. In the amino acids provided in the Sequence Listing, * corresponds to the stop codon.

The nucleic acid sequences of the present invention also include, nucleic acid sequences that
15 hybridize to the complement of SEQ ID NO: 1-8051 under stringent hybridization conditions; nucleic acid sequences which are allelic variants or species homologues of any of the nucleic acid sequences recited above, or nucleic acid sequences that encode a peptide comprising a specific domain or truncation of the peptides encoded by SEQ ID NO: 1-8051. A polynucleotide comprising a nucleotide sequence having at least 90% identity to an identifying sequence of SEQ
20 ID NO: 1-8051 or a degenerate variant or fragment thereof. The identifying sequence can be 100 base pairs in length.

The nucleic acid sequences of the present invention also include the sequence information from the nucleic acid sequences of SEQ ID NO: 1-8051. The sequence information can be a segment of any one of SEQ ID NO: 1-8051 that uniquely identifies or represents the sequence
25 information of SEQ ID NO: 1-8051.

A collection as used in this application can be a collection of only one polynucleotide. The collection of sequence information or identifying information of each sequence can be provided on a nucleic acid array. In one embodiment, segments of sequence information is provided on a nucleic acid array to detect the polynucleotide that contains the segment. The array can be designed
30 to detect full-match or mismatch to the polynucleotide that contains the segment. The collection can also be provided in a computer-readable format.

This invention also includes the reverse or direct complement of any of the nucleic acid sequences recited above; cloning or expression vectors containing the nucleic acid sequences; and host cells or organisms transformed with these expression vectors. Nucleic acid sequences (or their
35 reverse or direct complements) according to the invention have numerous applications in a variety

of techniques known to those skilled in the art of molecular biology, such as use as hybridization probes, use as primers for PCR, use in an array, use in computer-readable media, use in sequencing full-length genes, use for chromosome and gene mapping, use in the recombinant production of protein, and use in the generation of anti-sense DNA or RNA, their chemical analogs and the like.

5 In a preferred embodiment, the nucleic acid sequences of SEQ ID NO: 1-8051 or novel segments or parts of the nucleic acids of the invention are used as primers in expression assays that are well known in the art. In a particularly preferred embodiment, the nucleic acid sequences of SEQ ID NO: 1-8051 or novel segments or parts of the nucleic acids provided herein are used in diagnostics for identifying expressed genes or, as well known in the art and exemplified by Vollrath
10 et al., *Science* 258:52-59 (1992), as expressed sequence tags for physical mapping of the human genome.

The isolated polynucleotides of the invention include, but are not limited to, a polynucleotide comprising any one of the nucleotide sequences set forth in SEQ ID NO: 1-8051; a polynucleotide comprising any of the full length protein coding sequences of SEQ ID NO: 1-8051;
15 and a polynucleotide comprising any of the nucleotide sequences of the mature protein coding sequences of SEQ ID NO: 1-8051. The polynucleotides of the present invention also include, but are not limited to, a polynucleotide that hybridizes under stringent hybridization conditions to (a) the complement of any one of the nucleotide sequences set forth in SEQ ID NO: 1-8051; (b) a nucleotide sequence encoding any one of the amino acid sequences set forth in the Sequence Listing
20 (*e.g.*, SEQ ID NO: 8052-16102); (c) a polynucleotide which is an allelic variant of any polynucleotides recited above; (d) a polynucleotide which encodes a species homolog (*e.g.* orthologs) of any of the proteins recited above; or (e) a polynucleotide that encodes a polypeptide comprising a specific domain or truncation of any of the polypeptides comprising an amino acid sequence set forth in the Sequence Listing.

25 The isolated polypeptides of the invention include, but are not limited to, a polypeptide comprising any of the amino acid sequences set forth in the Sequence Listing; or the corresponding full length or mature protein. Polypeptides of the invention also include polypeptides with biological activity that are encoded by (a) any of the polynucleotides having a nucleotide sequence set forth in SEQ ID NO: 1-8051; or (b) polynucleotides that hybridize to the complement of the
30 polynucleotides of (a) under stringent hybridization conditions. Biologically or immunologically active variants of any of the polypeptide sequences in the Sequence Listing, and "substantial equivalents" thereof (*e.g.*, with at least about 65%, 70%, 75%, 80%, 85%, 90%, 95%, 98% or 99% amino acid sequence identity) that preferably retain biological activity are also contemplated. The polypeptides of the invention may be wholly or partially chemically synthesized but are preferably

produced by recombinant means using the genetically engineered cells (*e.g.* host cells) of the invention.

The invention also provides compositions comprising a polypeptide of the invention. Polypeptide compositions of the invention may further comprise an acceptable carrier, such as a hydrophilic, *e.g.*, pharmaceutically acceptable, carrier.

The invention also provides host cells transformed or transfected with a polynucleotide of the invention.

The invention also relates to methods for producing a polypeptide of the invention comprising growing a culture of the host cells of the invention in a suitable culture medium under conditions permitting expression of the desired polypeptide, and purifying the polypeptide from the culture or from the host cells. Preferred embodiments include those in which the protein produced by such process is a mature form of the protein.

Polynucleotides according to the invention have numerous applications in a variety of techniques known to those skilled in the art of molecular biology. These techniques include use as hybridization probes, use as oligomers, or primers, for PCR, use for chromosome and gene mapping, use in the recombinant production of protein, and use in generation of anti-sense DNA or RNA, their chemical analogs and the like. For example, when the expression of an mRNA is largely restricted to a particular cell or tissue type, polynucleotides of the invention can be used as hybridization probes to detect the presence of the particular cell or tissue mRNA in a sample using, *e.g.*, *in situ* hybridization.

In other exemplary embodiments, the polynucleotides are used in diagnostics as expressed sequence tags for identifying expressed genes or, as well known in the art and exemplified by Vollrath et al., Science 258:52-59 (1992), as expressed sequence tags for physical mapping of the human genome.

The polypeptides according to the invention can be used in a variety of conventional procedures and methods that are currently applied to other proteins. For example, a polypeptide of the invention can be used to generate an antibody that specifically binds the polypeptide. Such antibodies, particularly monoclonal antibodies, are useful for detecting or quantitating the polypeptide in tissue. The polypeptides of the invention can also be used as molecular weight markers, and as a food supplement.

Methods are also provided for preventing, treating, or ameliorating a medical condition which comprises the step of administering to a mammalian subject a therapeutically effective amount of a composition comprising a polypeptide of the present invention and a pharmaceutically acceptable carrier.

In particular, the polypeptides and polynucleotides of the invention can be utilized, for example, in methods for the prevention and/or treatment of disorders involving aberrant protein expression or biological activity.

The present invention further relates to methods for detecting the presence of the
5 polynucleotides or polypeptides of the invention in a sample. Such methods can, for example, be utilized as part of prognostic and diagnostic evaluation of disorders as recited herein and for the identification of subjects exhibiting a predisposition to such conditions. The invention provides a method for detecting the polynucleotides of the invention in a sample, comprising contacting the sample with a compound that binds to and forms a complex with the polynucleotide of
10 interest for a period sufficient to form the complex and under conditions sufficient to form a complex and detecting the complex such that if a complex is detected, the polynucleotide of interest is detected. The invention also provides a method for detecting the polypeptides of the invention in a sample comprising contacting the sample with a compound that binds to and forms a complex with the polypeptide under conditions and for a period sufficient to form the complex
15 and detecting the formation of the complex such that if a complex is formed, the polypeptide is detected.

The invention also provides kits comprising polynucleotide probes and/or monoclonal antibodies, and optionally quantitative standards, for carrying out methods of the invention. Furthermore, the invention provides methods for evaluating the efficacy of drugs, and
20 monitoring the progress of patients, involved in clinical trials for the treatment of disorders as recited above.

The invention also provides methods for the identification of compounds that modulate (*i.e.*, increase or decrease) the expression or activity of the polynucleotides and/or polypeptides of the invention. Such methods can be utilized, for example, for the identification of compounds
25 that can ameliorate symptoms of disorders as recited herein. Such methods can include, but are not limited to, assays for identifying compounds and other substances that interact with (*e.g.*, bind to) the polypeptides of the invention. The invention provides a method for identifying a compound that binds to the polypeptides of the invention comprising contacting the compound with a polypeptide of the invention in a cell for a time sufficient to form a
30 polypeptide/compound complex, wherein the complex drives expression of a reporter gene sequence in the cell; and detecting the complex by detecting the reporter gene sequence expression such that if expression of the reporter gene is detected the compound that binds to a polypeptide of the invention is identified.

The methods of the invention also provides methods for treatment which involve the
35 administration of the polynucleotides or polypeptides of the invention to individuals exhibiting

symptoms or tendencies. In addition, the invention encompasses methods for treating diseases or disorders as recited herein comprising administering compounds and other substances that modulate the overall activity of the target gene products. Compounds and other substances can effect such modulation either on the level of target gene/protein expression or target protein activity.

The polypeptides of the present invention and the polynucleotides encoding them are also useful for the same functions known to one of skill in the art as the polypeptides and polynucleotides to which they have homology (set forth in the sequence listing). If no homology is set forth for a sequence, then the polypeptides and polynucleotides of the present invention are useful for a variety of applications, as described herein, including use in arrays for detection.

4. DETAILED DESCRIPTION OF THE INVENTION

4.1 DEFINITIONS

It must be noted that as used herein and in the appended claims, the singular forms “a”, “an” and “the” include plural references unless the context clearly dictates otherwise.

The term “active” refers to those forms of the polypeptide which retain the biologic and/or immunologic activities of any naturally occurring polypeptide. According to the invention, the terms “biologically active” or “biological activity” refer to a protein or peptide having structural, regulatory or biochemical functions of a naturally occurring molecule. Likewise “immunologically active” or “immunological activity” refers to the capability of the natural, recombinant or synthetic polypeptide to induce a specific immune response in appropriate animals or cells and to bind with specific antibodies.

The term “activated cells” as used in this application are those cells which are engaged in extracellular or intracellular membrane trafficking, including the export of secretory or enzymatic molecules as part of a normal or disease process.

The terms “complementary” or “complementarity” refer to the natural binding of polynucleotides by base pairing. For example, the sequence 5'-AGT-3' binds to the complementary sequence 3'-TCA-5'. Complementarity between two single-stranded molecules may be “partial” such that only some of the nucleic acids bind or it may be “complete” such that total complementarity exists between the single stranded molecules. The degree of complementarity between the nucleic acid strands has significant effects on the efficiency and strength of the hybridization between the nucleic acid strands.

The term "embryonic stem cells (ES)" refers to a cell that can give rise to many differentiated cell types in an embryo or an adult, including the germ cells. The term "germ line stem cells (GSCs)" refers to stem cells derived from primordial stem cells that provide a steady and continuous source of germ cells for the production of gametes. The term "primordial germ cells (PGCs)" refers to a small population of cells set aside from other cell lineages particularly from the yolk sac, mesenteries, or gonadal ridges during embryogenesis that have the potential to differentiate into germ cells and other cells. PGCs are the source from which GSCs and ES cells are derived. The PGCs, the GSCs and the ES cells are capable of self-renewal. Thus these cells not only populate the germ line and give rise to a plurality of terminally differentiated cells that comprise the adult specialized organs, but are able to regenerate themselves.

The term "expression modulating fragment," EMF, means a series of nucleotides which modulates the expression of an operably linked ORF or another EMF.

As used herein, a sequence is said to "modulate the expression of an operably linked sequence" when the expression of the sequence is altered by the presence of the EMF. EMFs include, but are not limited to, promoters, and promoter modulating sequences (inducible elements). One class of EMFs are nucleic acid fragments which induce the expression of an operably linked ORF in response to a specific regulatory factor or physiological event.

The terms "nucleotide sequence" or "nucleic acid" or "polynucleotide" or "oligonucleotide" are used interchangeably and refer to a heteropolymer of nucleotides or the sequence of these nucleotides. These phrases also refer to DNA or RNA of genomic or synthetic origin which may be single-stranded or double-stranded and may represent the sense or the antisense strand, to peptide nucleic acid (PNA) or to any DNA-like or RNA-like material. In the sequences herein A is adenine, C is cytosine, T is thymine, G is guanine and N is A, C, G or T (U). It is contemplated that where the polynucleotide is RNA, the T (thymine) in the sequences provided herein is substituted with U (uracil). Generally, nucleic acid segments provided by this invention may be assembled from fragments of the genome and short oligonucleotide linkers, or from a series of oligonucleotides, or from individual nucleotides, to provide a synthetic nucleic acid which is capable of being expressed in a recombinant transcriptional unit comprising regulatory elements derived from a microbial or viral operon, or a eukaryotic gene.

The terms "oligonucleotide fragment" or a "polynucleotide fragment", "portion," or "segment" or "probe" or "primer" are used interchangeably and refer to a sequence of nucleotide residues which are at least about 5 nucleotides, more preferably at least about 7 nucleotides, more preferably at least about 9 nucleotides, more preferably at least about 11 nucleotides and most preferably at least about 17 nucleotides. The fragment is preferably less than about 500 nucleotides, preferably less than about 200 nucleotides, more preferably less than about 100

nucleotides, more preferably less than about 50 nucleotides and most preferably less than 30 nucleotides. Preferably the probe is from about 6 nucleotides to about 200 nucleotides, preferably from about 15 to about 50 nucleotides, more preferably from about 17 to 30 nucleotides and most preferably from about 20 to 25 nucleotides. Preferably the fragments can be used in polymerase chain reaction (PCR), various hybridization procedures or microarray procedures to identify or amplify identical or related parts of mRNA or DNA molecules. A fragment or segment may uniquely identify each polynucleotide sequence of the present invention. Preferably the fragment comprises a sequence substantially similar to any one of SEQ ID NO: 1-8051.

Probes may, for example, be used to determine whether specific mRNA molecules are present in a cell or tissue or to isolate similar nucleic acid sequences from chromosomal DNA as described by Walsh et al. (Walsh, P.S. et al., 1992, PCR Methods Appl 1:241-250). They may be labeled by nick translation, Klenow fill-in reaction, PCR, or other methods well known in the art. Probes of the present invention, their preparation and/or labeling are elaborated in Sambrook, J. et al., 1989, Molecular Cloning: A Laboratory Manual, Cold Spring Harbor Laboratory, NY; or Ausubel, F.M. et al., 1989, Current Protocols in Molecular Biology, John Wiley & Sons, New York NY, both of which are incorporated herein by reference in their entirety.

The nucleic acid sequences of the present invention also include the sequence information from the nucleic acid sequences of SEQ ID NO: 1-8051. The sequence information can be a segment of any one of SEQ ID NO: 1-8051 that uniquely identifies or represents the sequence information of that sequence of SEQ ID NO: 1-8051. One such segment can be a twenty-mer nucleic acid sequence because the probability that a twenty-mer is fully matched in the human genome is 1 in 300. In the human genome, there are three billion base pairs in one set of chromosomes. Because 4^{20} possible twenty-mers exist, there are 300 times more twenty-mers than there are base pairs in a set of human chromosomes. Using the same analysis, the probability for a seventeen-mer to be fully matched in the human genome is approximately 1 in 5. When these segments are used in arrays for expression studies, fifteen-mer segments can be used. The probability that the fifteen-mer is fully matched in the expressed sequences is also approximately one in five because expressed sequences comprise less than approximately 5% of the entire genome sequence.

Similarly, when using sequence information for detecting a single mismatch, a segment can be a twenty-five mer. The probability that the twenty-five mer would appear in a human genome with a single mismatch is calculated by multiplying the probability for a full match ($1 \div 4^{25}$) times the increased probability for mismatch at each nucleotide position (3×25). The probability that an

eighteen mer with a single mismatch can be detected in an array for expression studies is approximately one in five. The probability that a twenty-mer with a single mismatch can be detected in a human genome is approximately one in five.

The term "open reading frame," ORF, means a series of nucleotide triplets coding for amino acids without any termination codons and is a sequence translatable into protein.

The terms "operably linked" or "operably associated" refer to functionally related nucleic acid sequences. For example, a promoter is operably associated or operably linked with a coding sequence if the promoter controls the transcription of the coding sequence. While operably linked nucleic acid sequences can be contiguous and in the same reading frame, certain genetic elements *e.g.* repressor genes are not contiguously linked to the coding sequence but still control transcription/translation of the coding sequence.

The term "pluripotent" refers to the capability of a cell to differentiate into a number of differentiated cell types that are present in an adult organism. A pluripotent cell is restricted in its differentiation capability in comparison to a totipotent cell.

The terms "polypeptide" or "peptide" or "amino acid sequence" refer to an oligopeptide, peptide, polypeptide or protein sequence or fragment thereof and to naturally occurring or synthetic molecules. A polypeptide "fragment," "portion," or "segment" is a stretch of amino acid residues of at least about 5 amino acids, preferably at least about 7 amino acids, more preferably at least about 9 amino acids and most preferably at least about 17 or more amino acids. The peptide preferably is not greater than about 200 amino acids, more preferably less than 150 amino acids and most preferably less than 100 amino acids. Preferably the peptide is from about 5 to about 200 amino acids. To be active, any polypeptide must have sufficient length to display biological and/or immunological activity.

The term "naturally occurring polypeptide" refers to polypeptides produced by cells that have not been genetically engineered and specifically contemplates various polypeptides arising from post-translational modifications of the polypeptide including, but not limited to, acetylation, carboxylation, glycosylation, phosphorylation, lipidation and acylation.

The term "translated protein coding portion" means a sequence which encodes for the full length protein which may include any leader sequence or any processing sequence.

The term "mature protein coding sequence" means a sequence which encodes a peptide or protein without a signal or leader sequence. The "mature protein portion" means that portion of the protein which does not include a signal or leader sequence. The peptide may have been produced by processing in the cell which removes any leader/signal sequence. The mature protein portion may or may not include an initial methionine residue. The methionine residue may be removed from the protein during processing in the cell. The peptide may be produced

synthetically or the protein may have been produced using a polynucleotide only encoding for the mature protein coding sequence.

The term "derivative" refers to polypeptides chemically modified by such techniques as ubiquitination, labeling (*e.g.*, with radionuclides or various enzymes), covalent polymer attachment such as pegylation (derivatization with polyethylene glycol) and insertion or substitution by chemical synthesis of amino acids such as ornithine, which do not normally occur in human proteins.

The term "variant" (or "analog") refers to any polypeptide differing from naturally occurring polypeptides by amino acid insertions, deletions, and substitutions, created using, *e.g.*, recombinant DNA techniques. Guidance in determining which amino acid residues may be replaced, added or deleted without abolishing activities of interest, may be found by comparing the sequence of the particular polypeptide with that of homologous peptides and minimizing the number of amino acid sequence changes made in regions of high homology (conserved regions) or by replacing amino acids with consensus sequence.

Alternatively, recombinant variants encoding these same or similar polypeptides may be synthesized or selected by making use of the "redundancy" in the genetic code. Various codon substitutions, such as the silent changes which produce various restriction sites, may be introduced to optimize cloning into a plasmid or viral vector or expression in a particular prokaryotic or eukaryotic system. Mutations in the polynucleotide sequence may be reflected in the polypeptide or domains of other peptides added to the polypeptide to modify the properties of any part of the polypeptide, to change characteristics such as ligand-binding affinities, interchain affinities, or degradation/turnover rate.

Preferably, amino acid "substitutions" are the result of replacing one amino acid with another amino acid having similar structural and/or chemical properties, *i.e.*, conservative amino acid replacements. "Conservative" amino acid substitutions may be made on the basis of similarity in polarity, charge, solubility, hydrophobicity, hydrophilicity, and/or the amphipathic nature of the residues involved. For example, nonpolar (hydrophobic) amino acids include alanine, leucine, isoleucine, valine, proline, phenylalanine, tryptophan, and methionine; polar neutral amino acids include glycine, serine, threonine, cysteine, tyrosine, asparagine, and glutamine; positively charged (basic) amino acids include arginine, lysine, and histidine; and negatively charged (acidic) amino acids include aspartic acid and glutamic acid. "Insertions" or "deletions" are preferably in the range of about 1 to 20 amino acids, more preferably 1 to 10 amino acids. The variation allowed may be experimentally determined by systematically making insertions, deletions, or substitutions of amino acids in a polypeptide molecule using recombinant DNA techniques and assaying the resulting recombinant variants for activity.

Alternatively, where alteration of function is desired, insertions, deletions or non-conservative alterations can be engineered to produce altered polypeptides. Such alterations can, for example, alter one or more of the biological functions or biochemical characteristics of the polypeptides of the invention. For example, such alterations may change polypeptide characteristics such as ligand-binding affinities, interchain affinities, or degradation/turnover rate. Further, such alterations can be selected so as to generate polypeptides that are better suited for expression, scale up and the like in the host cells chosen for expression. For example, cysteine residues can be deleted or substituted with another amino acid residue in order to eliminate disulfide bridges.

The terms "purified" or "substantially purified" as used herein denotes that the indicated nucleic acid or polypeptide is present in the substantial absence of other biological macromolecules, *e.g.*, polynucleotides, proteins, and the like. In one embodiment, the polynucleotide or polypeptide is purified such that it constitutes at least 95% by weight, more preferably at least 99% by weight, of the indicated biological macromolecules present (but water, buffers, and other small molecules, especially molecules having a molecular weight of less than 1000 daltons, can be present).

The term "isolated" as used herein refers to a nucleic acid or polypeptide separated from at least one other component (*e.g.*, nucleic acid or polypeptide) present with the nucleic acid or polypeptide in its natural source. In one embodiment, the nucleic acid or polypeptide is found in the presence of (if anything) only a solvent, buffer, ion, or other component normally present in a solution of the same. The terms "isolated" and "purified" do not encompass nucleic acids or polypeptides present in their natural source.

The term "recombinant," when used herein to refer to a polypeptide or protein, means that a polypeptide or protein is derived from recombinant (*e.g.*, microbial, insect, or mammalian) expression systems. "Microbial" refers to recombinant polypeptides or proteins made in bacterial or fungal (*e.g.*, yeast) expression systems. As a product, "recombinant microbial" defines a polypeptide or protein essentially free of native endogenous substances and unaccompanied by associated native glycosylation. Polypeptides or proteins expressed in most bacterial cultures, *e.g.*, *E. coli*, will be free of glycosylation modifications; polypeptides or proteins expressed in yeast will have a glycosylation pattern in general different from those expressed in mammalian cells.

The term "recombinant expression vehicle or vector" refers to a plasmid or phage or virus or vector, for expressing a polypeptide from a DNA (RNA) sequence. An expression vehicle can comprise a transcriptional unit comprising an assembly of (1) a genetic element or elements having a regulatory role in gene expression, for example, promoters or enhancers, (2) a structural

or coding sequence which is transcribed into mRNA and translated into protein, and (3) appropriate transcription initiation and termination sequences. Structural units intended for use in yeast or eukaryotic expression systems preferably include a leader sequence enabling extracellular secretion of translated protein by a host cell. Alternatively, where recombinant protein is expressed without a leader or transport sequence, it may include an amino terminal methionine residue. This residue may or may not be subsequently cleaved from the expressed recombinant protein to provide a final product.

The term "recombinant expression system" means host cells which have stably integrated a recombinant transcriptional unit into chromosomal DNA or carry the recombinant transcriptional unit extrachromosomally. Recombinant expression systems as defined herein will express heterologous polypeptides or proteins upon induction of the regulatory elements linked to the DNA segment or synthetic gene to be expressed. This term also means host cells which have stably integrated a recombinant genetic element or elements having a regulatory role in gene expression, for example, promoters or enhancers. Recombinant expression systems as defined herein will express polypeptides or proteins endogenous to the cell upon induction of the regulatory elements linked to the endogenous DNA segment or gene to be expressed. The cells can be prokaryotic or eukaryotic.

The term "secreted" includes a protein that is transported across or through a membrane, including transport as a result of signal sequences in its amino acid sequence when it is expressed in a suitable host cell. "Secreted" proteins include without limitation proteins secreted wholly (*e.g.*, soluble proteins) or partially (*e.g.*, receptors) from the cell in which they are expressed. "Secreted" proteins also include without limitation proteins that are transported across the membrane of the endoplasmic reticulum. "Secreted" proteins are also intended to include proteins containing non-typical signal sequences (*e.g.* Interleukin-1 Beta, see Krasney, P.A. and Young, P.R. (1992) Cytokine 4(2):134 -143) and factors released from damaged cells (*e.g.* Interleukin-1 Receptor Antagonist, see Arend, W.P. et. al. (1998) Annu. Rev. Immunol. 16:27-55)

Where desired, an expression vector may be designed to contain a "signal or leader sequence" which will direct the polypeptide through the membrane of a cell. Such a sequence may be naturally present on the polypeptides of the present invention or provided from heterologous protein sources by recombinant DNA techniques.

The term "stringent" is used to refer to conditions that are commonly understood in the art as stringent. Stringent conditions can include highly stringent conditions (*i.e.*, hybridization to filter-bound DNA in 0.5 M NaHPO₄, 7% sodium dodecyl sulfate (SDS), 1 mM EDTA at 65°C, and washing in 0.1X SSC/0.1% SDS at 68°C), and moderately stringent conditions (*i.e.*,

washing in 0.2X SSC/0.1% SDS at 42°C). Other exemplary hybridization conditions are described herein in the examples.

In instances of hybridization of deoxyoligonucleotides, additional exemplary stringent hybridization conditions include washing in 6X SSC/0.05% sodium pyrophosphate at 37°C (for 14-base oligonucleotides), 48°C (for 17-base oligos), 55°C (for 20-base oligonucleotides), and 60°C (for 23-base oligonucleotides).

As used herein, "substantially equivalent" can refer both to nucleotide and amino acid sequences, for example a mutant sequence, that varies from a reference sequence by one or more substitutions, deletions, or additions, the net effect of which does not result in an adverse functional dissimilarity between the reference and subject sequences. Typically, such a substantially equivalent sequence varies from one of those listed herein by no more than about 35% (*i.e.*, the number of individual residue substitutions, additions, and/or deletions in a substantially equivalent sequence, as compared to the corresponding reference sequence, divided by the total number of residues in the substantially equivalent sequence is about 0.35 or less).

Such a sequence is said to have 65% sequence identity to the listed sequence. In one embodiment, a substantially equivalent, *e.g.*, mutant, sequence of the invention varies from a listed sequence by no more than 30% (70% sequence identity); in a variation of this embodiment, by no more than 25% (75% sequence identity); and in a further variation of this embodiment, by no more than 20% (80% sequence identity) and in a further variation of this embodiment, by no more than 10% (90% sequence identity) and in a further variation of this embodiment, by no more than 5% (95% sequence identity). Substantially equivalent, *e.g.*, mutant, amino acid sequences according to the invention preferably have at least 80% sequence identity with a listed amino acid sequence, more preferably at least 85% sequence identity, more preferably at least 90% sequence identity, more preferably at least 95% identity, more preferably at least 98% identity, and most preferably at least 99% identity. Substantially equivalent nucleotide sequences of the invention can have lower percent sequence identities, taking into account, for example, the redundancy or degeneracy of the genetic code. Preferably, nucleotide sequence has at least about 65% identity, more preferably at least about 75% identity, more preferably at least about 80% sequence identity, more preferably at least about 85% sequence identity, more preferably at least about 90% sequence identity, and most preferably at least about 95% identity, more preferably at least about 98% sequence identity, and most preferably at least about 99% sequence identity. For the purposes of the present invention, sequences having substantially equivalent biological activity and substantially equivalent expression characteristics are considered substantially equivalent. For the purposes of determining equivalence, truncation of the mature sequence (*e.g.*, via a mutation which creates a spurious stop codon) should be

disregarded. Sequence identity may be determined, *e.g.*, using the Jotun Hein method (Hein, J. (1990) *Methods Enzymol.* 183:626-645). Identity between sequences can also be determined by other methods known in the art, *e.g.* by varying hybridization conditions.

The term "totipotent" refers to the capability of a cell to differentiate into all of the cell types of an adult organism.

The term "transformation" means introducing DNA into a suitable host cell so that the DNA is replicable, either as an extrachromosomal element, or by chromosomal integration. The term "transfection" refers to the taking up of an expression vector by a suitable host cell, whether or not any coding sequences are in fact expressed. The term "infection" refers to the introduction of nucleic acids into a suitable host cell by use of a virus or viral vector.

As used herein, an "uptake modulating fragment," UMF, means a series of nucleotides which mediate the uptake of a linked DNA fragment into a cell. UMFs can be readily identified using known UMFs as a target sequence or target motif with the computer-based systems described below. The presence and activity of a UMF can be confirmed by attaching the suspected UMF to a marker sequence. The resulting nucleic acid molecule is then incubated with an appropriate host under appropriate conditions and the uptake of the marker sequence is determined. As described above, a UMF will increase the frequency of uptake of a linked marker sequence.

Each of the above terms is meant to encompass all that is described for each, unless the context dictates otherwise.

4.2 NUCLEIC ACIDS OF THE INVENTION

Nucleotide sequences of the invention are set forth in the Sequence Listing.

The isolated polynucleotides of the invention include a polynucleotide comprising the nucleotide sequences of SEQ ID NO: 1-8051; a polynucleotide encoding any one of the peptide sequences of SEQ ID NO: 8052-16102; and a polynucleotide comprising the nucleotide sequence encoding the mature protein coding sequence of the polypeptides of any one of SEQ ID NO: 8052-16102. The polynucleotides of the present invention also include, but are not limited to, a polynucleotide that hybridizes under stringent conditions to (a) the complement of any of the nucleotides sequences of SEQ ID NO: 1-8051; (b) nucleotide sequences encoding any one of the amino acid sequences set forth in the Sequence Listing; (c) a polynucleotide which is an allelic variant of any polynucleotide recited above; (d) a polynucleotide which encodes a species homolog of any of the proteins recited above; or (e) a polynucleotide that encodes a polypeptide comprising a specific domain or truncation of the polypeptides of SEQ ID NO: 8052-16102. Domains of interest may depend on the nature of the encoded polypeptide; *e.g.*, domains in

receptor-like polypeptides include ligand-binding, extracellular, transmembrane, or cytoplasmic domains, or combinations thereof; domains in immunoglobulin-like proteins include the variable immunoglobulin-like domains; domains in enzyme-like polypeptides include catalytic and substrate binding domains; and domains in ligand polypeptides include receptor-binding domains.

The polynucleotides of the invention include naturally occurring or wholly or partially synthetic DNA, *e.g.*, cDNA and genomic DNA, and RNA, *e.g.*, mRNA. The polynucleotides may include all of the coding region of the cDNA or may represent a portion of the coding region of the cDNA.

The present invention also provides genes corresponding to the cDNA sequences disclosed herein. The corresponding genes can be isolated in accordance with known methods using the sequence information disclosed herein. Such methods include the preparation of probes or primers from the disclosed sequence information for identification and/or amplification of genes in appropriate genomic libraries or other sources of genomic materials. Further 5' and 3' sequence can be obtained using methods known in the art. For example, full length cDNA or genomic DNA that corresponds to any of the polynucleotides of SEQ ID NO: 1-8051 can be obtained by screening appropriate cDNA or genomic DNA libraries under suitable hybridization conditions using any of the polynucleotides of SEQ ID NO: 1-8051 or a portion thereof as a probe. Alternatively, the polynucleotides of SEQ ID NO: 1-8051 may be used as the basis for suitable primer(s) that allow identification and/or amplification of genes in appropriate genomic DNA or cDNA libraries.

The nucleic acid sequences of the invention can be assembled from ESTs and sequences (including cDNA and genomic sequences) obtained from one or more public databases, such as dbEST, gbpr, and UniGene. The EST sequences can provide identifying sequence information, representative fragment or segment information, or novel segment information for the full-length gene.

The polynucleotides of the invention also provide polynucleotides including nucleotide sequences that are substantially equivalent to the polynucleotides recited above. Polynucleotides according to the invention can have, *e.g.*, at least about 65%, at least about 70%, at least about 75%, at least about 80%, 81%, 82%, 83%, 84%, more typically at least about 85%, 86%, 87%, 88%, 89%, more typically at least about 90%, 91%, 92%, 93%, 94%, and even more typically at least about 95%, 96%, 97%, 98%, 99%, sequence identity to a polynucleotide recited above.

Included within the scope of the nucleic acid sequences of the invention are nucleic acid sequence fragments that hybridize under stringent conditions to any of the nucleotide sequences of SEQ ID NO: 1-8051, or complements thereof, which fragment is greater than about 5 nucleotides, preferably 7 nucleotides, more preferably greater than 9 nucleotides and most

preferably greater than 17 nucleotides. Fragments of, *e.g.* 15, 17, or 20 nucleotides or more that are selective for (*i.e.* specifically hybridize to any one of the polynucleotides of the invention) are contemplated. Probes capable of specifically hybridizing to a polynucleotide can differentiate polynucleotide sequences of the invention from other polynucleotide sequences in the same family of genes or can differentiate human genes from genes of other species, and are preferably based on unique nucleotide sequences.

The sequences falling within the scope of the present invention are not limited to these specific sequences, but also include allelic and species variations thereof. Allelic and species variations can be routinely determined by comparing the sequence provided in SEQ ID NO: 1-8051, a representative fragment thereof, or a nucleotide sequence at least 90% identical, preferably 95% identical, to SEQ ID NO: 1-8051 with a sequence from another isolate of the same species. Furthermore, to accommodate codon variability, the invention includes nucleic acid molecules coding for the same amino acid sequences as do the specific ORFs disclosed herein. In other words, in the coding region of an ORF, substitution of one codon for another codon that encodes the same amino acid is expressly contemplated.

The nearest neighbor or homology result for the nucleic acids of the present invention, including SEQ ID NO: 1-8051 can be obtained by searching a database using an algorithm or a program. Preferably, a BLAST which stands for Basic Local Alignment Search Tool is used to search for local sequence alignments (Altschul, S.F. J Mol. Evol. 36 290-300 (1993) and Altschul S.F. et al. J. Mol. Biol. 21:403-410 (1990)). Alternatively a FASTA version 3 search against Genpept, using Fastxy algorithm.

Species homologs (or orthologs) of the disclosed polynucleotides and proteins are also provided by the present invention. Species homologs may be isolated and identified by making suitable probes or primers from the sequences provided herein and screening a suitable nucleic acid source from the desired species.

The invention also encompasses allelic variants of the disclosed polynucleotides or proteins; that is, naturally occurring alternative forms of the isolated polynucleotide which also encode proteins which are identical, homologous or related to that encoded by the polynucleotides.

The nucleic acid sequences of the invention are further directed to sequences which encode variants of the described nucleic acids. These amino acid sequence variants may be prepared by methods known in the art by introducing appropriate nucleotide changes into a native or variant polynucleotide. There are two variables in the construction of amino acid sequence variants: the location of the mutation and the nature of the mutation. Nucleic acids encoding the amino acid sequence variants are preferably constructed by mutating the

polynucleotide to encode an amino acid sequence that does not occur in nature. These nucleic acid alterations can be made at sites that differ in the nucleic acids from different species (variable positions) or in highly conserved regions (constant regions). Sites at such locations will typically be modified in series, *e.g.*, by substituting first with conservative choices (*e.g.*, hydrophobic amino acid to a different hydrophobic amino acid) and then with more distant choices (*e.g.*, hydrophobic amino acid to a charged amino acid), and then deletions or insertions may be made at the target site. Amino acid sequence deletions generally range from about 1 to 30 residues, preferably about 1 to 10 residues, and are typically contiguous. Amino acid insertions include amino- and/or carboxyl-terminal fusions ranging in length from one to one hundred or more residues, as well as intrasequence insertions of single or multiple amino acid residues. Intrasequence insertions may range generally from about 1 to 10 amino residues, preferably from 1 to 5 residues. Examples of terminal insertions include the heterologous signal sequences necessary for secretion or for intracellular targeting in different host cells and sequences such as FLAG or poly-histidine sequences useful for purifying the expressed protein.

In a preferred method, polynucleotides encoding the novel amino acid sequences are changed via site-directed mutagenesis. This method uses oligonucleotide sequences to alter a polynucleotide to encode the desired amino acid variant, as well as sufficient adjacent nucleotides on both sides of the changed amino acid to form a stable duplex on either side of the site of being changed. In general, the techniques of site-directed mutagenesis are well known to those of skill in the art and this technique is exemplified by publications such as, Edelman et al., *DNA* 2:183 (1983). A versatile and efficient method for producing site-specific changes in a polynucleotide sequence was published by Zoller and Smith, *Nucleic Acids Res.* 10:6487-6500 (1982). PCR may also be used to create amino acid sequence variants of the novel nucleic acids. When small amounts of template DNA are used as starting material, primer(s) that differs slightly in sequence from the corresponding region in the template DNA can generate the desired amino acid variant. PCR amplification results in a population of product DNA fragments that differ from the polynucleotide template encoding the polypeptide at the position specified by the primer. The product DNA fragments replace the corresponding region in the plasmid and this gives a polynucleotide encoding the desired amino acid variant.

A further technique for generating amino acid variants is the cassette mutagenesis technique described in Wells et al., *Gene* 34:315 (1985); and other mutagenesis techniques well known in the art, such as, for example, the techniques in Sambrook et al., *supra*, and *Current Protocols in Molecular Biology*, Ausubel et al. Due to the inherent degeneracy of the genetic code, other DNA sequences which encode substantially the same or a functionally equivalent amino acid sequence may be used in the practice of the invention for the cloning and expression

of these novel nucleic acids. Such DNA sequences include those which are capable of hybridizing to the appropriate novel nucleic acid sequence under stringent conditions.

Polynucleotides encoding preferred polypeptide truncations of the invention can be used to generate polynucleotides encoding chimeric or fusion proteins comprising one or more domains of the invention and heterologous protein sequences.

The polynucleotides of the invention additionally include the complement of any of the polynucleotides recited above. The polynucleotide can be DNA (genomic, cDNA, amplified, or synthetic) or RNA. Methods and algorithms for obtaining such polynucleotides are well known to those of skill in the art and can include, for example, methods for determining hybridization conditions that can routinely isolate polynucleotides of the desired sequence identities.

In accordance with the invention, polynucleotide sequences comprising the mature protein coding sequences corresponding to any one of SEQ ID NO: 1-8051, or functional equivalents thereof, may be used to generate recombinant DNA molecules that direct the expression of that nucleic acid, or a functional equivalent thereof, in appropriate host cells. Also included are the cDNA inserts of any of the clones identified herein.

A polynucleotide according to the invention can be joined to any of a variety of other nucleotide sequences by well-established recombinant DNA techniques (see Sambrook J et al. (1989) *Molecular Cloning: A Laboratory Manual*, Cold Spring Harbor Laboratory, NY). Useful nucleotide sequences for joining to polynucleotides include an assortment of vectors, *e.g.*, plasmids, cosmids, lambda phage derivatives, phagemids, and the like, that are well known in the art. Accordingly, the invention also provides a vector including a polynucleotide of the invention and a host cell containing the polynucleotide. In general, the vector contains an origin of replication functional in at least one organism, convenient restriction endonuclease sites, and a selectable marker for the host cell. Vectors according to the invention include expression vectors, replication vectors, probe generation vectors, and sequencing vectors. A host cell according to the invention can be a prokaryotic or eukaryotic cell and can be a unicellular organism or part of a multicellular organism.

The present invention further provides recombinant constructs comprising a nucleic acid having any of the nucleotide sequences of SEQ ID NO: 1-8051 or a fragment thereof or any other polynucleotides of the invention. In one embodiment, the recombinant constructs of the present invention comprise a vector, such as a plasmid or viral vector, into which a nucleic acid having any of the nucleotide sequences of SEQ ID NO: 1-8051 or a fragment thereof is inserted, in a forward or reverse orientation. In the case of a vector comprising one of the ORFs of the present invention, the vector may further comprise regulatory sequences, including for example, a promoter, operably linked to the ORF. Large numbers of suitable vectors and promoters are

known to those of skill in the art and are commercially available for generating the recombinant constructs of the present invention. The following vectors are provided by way of example.

Bacterial: pBs, phagescript, PsiX174, pBluescript SK, pBs KS, pNH8a, pNH16a, pNH18a, pNH46a (Stratagene); pTrc99A, pKK223-3, pDR540, pRIT5 (Pharmacia).

5 Eukaryotic: pWLneo, pSV2cat, pOG44, PXTI, pSG (Stratagene) pSVK3, pBPV, pMSG, pSVL (Pharmacia).

The isolated polynucleotide of the invention may be operably linked to an expression control sequence such as the pMT2 or pED expression vectors disclosed in Kaufman et al, *Nucleic Acids Res.* 19, 4485-4490 (1991), in order to produce the protein recombinantly. Many
10 suitable expression control sequences are known in the art. General methods of expressing recombinant proteins are also known and are exemplified in R. Kaufman, *Methods in Enzymology* 185, 537-566 (1990). As defined herein "operably linked" means that the isolated polynucleotide of the invention and an expression control sequence are situated within a vector or cell in such a way that the protein is expressed by a host cell which has been transformed
15 (transfected) with the ligated polynucleotide/expression control sequence.

Promoter regions can be selected from any desired gene using CAT (chloramphenicol transferase) vectors or other vectors with selectable markers. Two appropriate vectors are pKK232-8 and pCM7. Particular named bacterial promoters include lacI, lacZ, T3, T7, gpt, lambda PR, and trc. Eukaryotic promoters include CMV immediate early, HSV thymidine
20 kinase, early and late SV40, LTRs from retrovirus, and mouse metallothionein-I. Selection of the appropriate vector and promoter is well within the level of ordinary skill in the art. Generally, recombinant expression vectors will include origins of replication and selectable markers permitting transformation of the host cell, e.g., the ampicillin resistance gene of *E. coli* and *S. cerevisiae* TRP1 gene, and a promoter derived from a highly-expressed gene to direct
25 transcription of a downstream structural sequence. Such promoters can be derived from operons encoding glycolytic enzymes such as 3-phosphoglycerate kinase (PGK), a-factor, acid phosphatase, or heat shock proteins, among others. The heterologous structural sequence is assembled in appropriate phase with translation initiation and termination sequences, and preferably, a leader sequence capable of directing secretion of translated protein into the
30 periplasmic space or extracellular medium. Optionally, the heterologous sequence can encode a fusion protein including an amino terminal identification peptide imparting desired characteristics, e.g., stabilization or simplified purification of expressed recombinant product. Useful expression vectors for bacterial use are constructed by inserting a structural DNA sequence encoding a desired protein together with suitable translation initiation and termination
35 signals in operable reading phase with a functional promoter. The vector will comprise one or

more phenotypic selectable markers and an origin of replication to ensure maintenance of the vector and to, if desirable, provide amplification within the host. Suitable prokaryotic hosts for transformation include *E. coli*, *Bacillus subtilis*, *Salmonella typhimurium* and various species within the genera *Pseudomonas*, *Streptomyces*, and *Staphylococcus*, although others may also be employed as a matter of choice.

As a representative but non-limiting example, useful expression vectors for bacterial use can comprise a selectable marker and bacterial origin of replication derived from commercially available plasmids comprising genetic elements of the well known cloning vector pBR322 (ATCC 37017). Such commercial vectors include, for example, pKK223-3 (Pharmacia Fine Chemicals, Uppsala, Sweden) and GEM 1 (Promega Biotech, Madison, WI, USA). These pBR322 "backbone" sections are combined with an appropriate promoter and the structural sequence to be expressed. Following transformation of a suitable host strain and growth of the host strain to an appropriate cell density, the selected promoter is induced or derepressed by appropriate means (*e.g.*, temperature shift or chemical induction) and cells are cultured for an additional period. Cells are typically harvested by centrifugation, disrupted by physical or chemical means, and the resulting crude extract retained for further purification.

Polynucleotides of the invention can also be used to induce immune responses. For example, as described in Fan et al., *Nat. Biotech.* 17:870-872 (1999), incorporated herein by reference, nucleic acid sequences encoding a polypeptide may be used to generate antibodies against the encoded polypeptide following topical administration of naked plasmid DNA or following injection, and preferably intramuscular injection of the DNA. The nucleic acid sequences are preferably inserted in a recombinant expression vector and may be in the form of naked DNA.

4.3 ANTISENSE

Another aspect of the invention pertains to isolated antisense nucleic acid molecules that are hybridizable to or complementary to the nucleic acid molecule comprising the nucleotide sequence of SEQ ID NO: 1-8051, or fragments, analogs or derivatives thereof. An "antisense" nucleic acid comprises a nucleotide sequence that is complementary to a "sense" nucleic acid encoding a protein, *e.g.*, complementary to the coding strand of a double-stranded cDNA molecule or complementary to an mRNA sequence. In specific aspects, antisense nucleic acid molecules are provided that comprise a sequence complementary to at least about 10, 25, 50, 100, 250 or 500 nucleotides or an entire coding strand, or to only a portion thereof. Nucleic acid molecules encoding fragments, homologs, derivatives and analogs of a protein of any of SEQ ID

NO: 8052-16102 or antisense nucleic acids complementary to a nucleic acid sequence of SEQ ID NO: 1-8051 are additionally provided.

In one embodiment, an antisense nucleic acid molecule is antisense to a "coding region" of the coding strand of a nucleotide sequence of the invention. The term "coding region" refers to the region of the nucleotide sequence comprising codons which are translated into amino acid residues. In another embodiment, the antisense nucleic acid molecule is antisense to a "noncoding region" of the coding strand of a nucleotide sequence of the invention. The term "noncoding region" refers to 5' and 3' sequences which flank the coding region that are not translated into amino acids (*i.e.*, also referred to as 5' and 3' untranslated regions).

Given the coding strand sequences encoding a nucleic acid disclosed herein (*e.g.*, SEQ ID NO: 1-8051), antisense nucleic acids of the invention can be designed according to the rules of Watson and Crick or Hoogsteen base pairing. The antisense nucleic acid molecule can be complementary to the entire coding region of a mRNA, but more preferably is an oligonucleotide that is antisense to only a portion of the coding or noncoding region of a mRNA. For example, the antisense oligonucleotide can be complementary to the region surrounding the translation start site of a mRNA. An antisense oligonucleotide can be, for example, about 5, 10, 15, 20, 25, 30, 35, 40, 45 or 50 nucleotides in length. An antisense nucleic acid of the invention can be constructed using chemical synthesis or enzymatic ligation reactions using procedures known in the art. For example, an antisense nucleic acid (*e.g.*, an antisense oligonucleotide) can be chemically synthesized using naturally occurring nucleotides or variously modified nucleotides designed to increase the biological stability of the molecules or to increase the physical stability of the duplex formed between the antisense and sense nucleic acids, *e.g.*, phosphorothioate derivatives and acridine substituted nucleotides can be used.

Examples of modified nucleotides that can be used to generate the antisense nucleic acid include: 5-fluorouracil, 5-bromouracil, 5-chlorouracil, 5-iodouracil, hypoxanthine, xanthine, 4-acetylcytosine, 5-(carboxyhydroxymethyl) uracil, 5-carboxymethylaminomethyl-2-thiouridine, 5-carboxymethylaminomethyluracil, dihydrouracil, beta-D-galactosylqueosine, inosine, N6-isopentenyladenine, 1-methylguanine, 1-methylinosine, 2,2-dimethylguanine, 2-methyladenine, 2-methylguanine, 3-methylcytosine, 5-methylcytosine, N6-adenine, 7-methylguanine, 5-methylaminomethyluracil, 5-methoxycarboxymethyl-2-thiouracil, beta-D-mannosylqueosine, 5'-methoxycarboxymethyluracil, 5-methoxyuracil, 2-methylthio-N6-isopentenyladenine, uracil-5-oxyacetic acid (*v*), wybutoxosine, pseudouracil, queosine, 2-thiocytosine, 5-methyl-2-thiouracil, 2-thiouracil, 4-thiouracil, 5-methyluracil, uracil-5-oxyacetic acid methylester, uracil-5-oxyacetic acid (*v*), 5-methyl-2-thiouracil, 3-(3-amino-3-N-2-carboxypropyl) uracil, (acp3)*w*, and 2,6-diaminopurine. Alternatively, the

antisense nucleic acid can be produced biologically using an expression vector into which a nucleic acid has been subcloned in an antisense orientation (*i.e.*, RNA transcribed from the inserted nucleic acid will be of an antisense orientation to a target nucleic acid of interest, described further in the following subsection).

5 The antisense nucleic acid molecules of the invention are typically administered to a subject or generated *in situ* such that they hybridize with or bind to cellular mRNA and/or genomic DNA encoding a protein according to the invention to thereby inhibit expression of the protein, *e.g.*, by inhibiting transcription and/or translation. The hybridization can be by conventional nucleotide complementarity to form a stable duplex, or, for example, in the case of
10 an antisense nucleic acid molecule that binds to DNA duplexes, through specific interactions in the major groove of the double helix. An example of a route of administration of antisense nucleic acid molecules of the invention includes direct injection at a tissue site. Alternatively, antisense nucleic acid molecules can be modified to target selected cells and then administered systemically. For example, for systemic administration, antisense molecules can be modified
15 such that they specifically bind to receptors or antigens expressed on a selected cell surface, *e.g.*, by linking the antisense nucleic acid molecules to peptides or antibodies that bind to cell surface receptors or antigens. The antisense nucleic acid molecules can also be delivered to cells using the vectors described herein. To achieve sufficient intracellular concentrations of antisense molecules, vector constructs in which the antisense nucleic acid molecule is placed under the
20 control of a strong pol II or pol III promoter are preferred.

 In yet another embodiment, the antisense nucleic acid molecule of the invention is an α -anomeric nucleic acid molecule. An α -anomeric nucleic acid molecule forms specific double-stranded hybrids with complementary RNA in which, contrary to the usual α -units, the strands run parallel to each other (Gaultier *et al.* (1987) *Nucleic Acids Res* 15: 6625-6641). The
25 antisense nucleic acid molecule can also comprise a 2'-o-methylribonucleotide (Inoue *et al.* (1987) *Nucleic Acids Res* 15: 6131-6148) or a chimeric RNA-DNA analogue (Inoue *et al.* (1987) *FEBS Lett* 215: 327-330).

4.4 RIBOZYMES AND PNA MOIETIES

30 In still another embodiment, an antisense nucleic acid of the invention is a ribozyme. Ribozymes are catalytic RNA molecules with ribonuclease activity that are capable of cleaving a single-stranded nucleic acid, such as a mRNA, to which they have a complementary region. Thus, ribozymes (*e.g.*, hammerhead ribozymes (described in Haselhoff and Gerlach (1988) *Nature* 334:585-591)) can be used to catalytically cleave a mRNA transcripts to thereby inhibit
35 translation of a mRNA. A ribozyme having specificity for a nucleic acid of the invention can be

designed based upon the nucleotide sequence of a DNA disclosed herein (*i.e.*, SEQ ID NO: 1-8051). For example, a derivative of a Tetrahymena L-19 IVS RNA can be constructed in which the nucleotide sequence of the active site is complementary to the nucleotide sequence to be cleaved in an mRNA of SEQ ID NO: 1-8051 (see, *e.g.*, Cech *et al.* U.S. Pat. No. 4,987,071; and Cech *et al.* U.S. Pat. No. 5,116,742). Alternatively, polynucleotides of the invention can be used to select a catalytic RNA having a specific ribonuclease activity from a pool of RNA molecules. See, *e.g.*, Bartel *et al.*, (1993) *Science* 261:1411-1418.

Alternatively, gene expression can be inhibited by targeting nucleotide sequences complementary to the regulatory region (*e.g.*, promoter and/or enhancers) to form triple helical structures that prevent transcription of the gene in target cells. See generally, Helene. (1991) *Anticancer Drug Des.* 6: 569-84; Helene. *et al.* (1992) *Ann. N.Y. Acad. Sci.* 660:27-36; and Maher (1992) *Bioassays* 14: 807-15.

In various embodiments, the nucleic acids of the invention can be modified at the base moiety, sugar moiety or phosphate backbone to improve, *e.g.*, the stability, hybridization, or solubility of the molecule. For example, the deoxyribose phosphate backbone of the nucleic acids can be modified to generate peptide nucleic acids (see Hyrup *et al.* (1996) *Bioorg Med Chem* 4: 5-23). As used herein, the terms "peptide nucleic acids" or "PNAs" refer to nucleic acid mimics, *e.g.*, DNA mimics, in which the deoxyribose phosphate backbone is replaced by a pseudopeptide backbone and only the four natural nucleobases are retained. The neutral backbone of PNAs has been shown to allow for specific hybridization to DNA and RNA under conditions of low ionic strength. The synthesis of PNA oligomers can be performed using standard solid phase peptide synthesis protocols as described in Hyrup *et al.* (1996) above; Perry-O'Keefe *et al.* (1996) *PNAS* 93: 14670-675.

PNAs of the invention can be used in therapeutic and diagnostic applications. For example, PNAs can be used as antisense or antigene agents for sequence-specific modulation of gene expression by, *e.g.*, inducing transcription or translation arrest or inhibiting replication. PNAs of the invention can also be used, *e.g.*, in the analysis of single base pair mutations in a gene by, *e.g.*, PNA directed PCR clamping; as artificial restriction enzymes when used in combination with other enzymes, *e.g.*, S1 nucleases (Hyrup B. (1996) above); or as probes or primers for DNA sequence and hybridization (Hyrup *et al.* (1996), above; Perry-O'Keefe (1996), above).

In another embodiment, PNAs of the invention can be modified, *e.g.*, to enhance their stability or cellular uptake, by attaching lipophilic or other helper groups to PNA, by the formation of PNA-DNA chimeras, or by the use of liposomes or other techniques of drug delivery known in the art. For example, PNA-DNA chimeras can be generated that may

combine the advantageous properties of PNA and DNA. Such chimeras allow DNA recognition enzymes, *e.g.*, RNase H and DNA polymerases, to interact with the DNA portion while the PNA portion would provide high binding affinity and specificity. PNA-DNA chimeras can be linked using linkers of appropriate lengths selected in terms of base stacking, number of bonds between the nucleobases, and orientation (Hyrup (1996) above). The synthesis of PNA-DNA chimeras can be performed as described in Hyrup (1996) above and Finn *et al.* (1996) *Nucl Acids Res* 24: 3357-63. For example, a DNA chain can be synthesized on a solid support using standard phosphoramidite coupling chemistry, and modified nucleoside analogs, *e.g.*, 5'-(4-methoxytrityl)amino-5'-deoxy-thymidine phosphoramidite, can be used between the PNA and the 5' end of DNA (Mag *et al.* (1989) *Nucl Acid Res* 17: 5973-88). PNA monomers are then coupled in a stepwise manner to produce a chimeric molecule with a 5' PNA segment and a 3' DNA segment (Finn *et al.* (1996) above). Alternatively, chimeric molecules can be synthesized with a 5' DNA segment and a 3' PNA segment. See, Petersen *et al.* (1975) *Bioorg Med Chem Lett* 5: 1119-11124.

In other embodiments, the oligonucleotide may include other appended groups such as peptides (*e.g.*, for targeting host cell receptors *in vivo*), or agents facilitating transport across the cell membrane (see, *e.g.*, Letsinger *et al.*, 1989, *Proc. Natl. Acad. Sci. U.S.A.* 86:6553-6556; Lemaitre *et al.*, 1987, *Proc. Natl. Acad. Sci.* 84:648-652; PCT Publication No. W088/09810) or the blood-brain barrier (see, *e.g.*, PCT Publication No. W089/10134). In addition, oligonucleotides can be modified with hybridization triggered cleavage agents (See, *e.g.*, Krol *et al.*, 1988, *BioTechniques* 6:958-976) or intercalating agents (see, *e.g.*, Zon, 1988, *Pharm. Res.* 5:539-549). To this end, the oligonucleotide may be conjugated to another molecule, *e.g.*, a peptide, a hybridization triggered cross-linking agent, a transport agent, a hybridization-triggered cleavage agent, etc.

4.5 HOSTS

The present invention further provides host cells genetically engineered to contain the polynucleotides of the invention. For example, such host cells may contain nucleic acids of the invention introduced into the host cell using known transformation, transfection or infection methods. The present invention still further provides host cells genetically engineered to express the polynucleotides of the invention, wherein such polynucleotides are in operative association with a regulatory sequence heterologous to the host cell which drives expression of the polynucleotides in the cell.

Knowledge of nucleic acid sequences allows for modification of cells to permit, or increase, expression of endogenous polypeptide. Cells can be modified (*e.g.*, by homologous

recombination) to provide increased polypeptide expression by replacing, in whole or in part, the naturally occurring promoter with all or part of a heterologous promoter so that the cells express the polypeptide at higher levels. The heterologous promoter is inserted in such a manner that it is operatively linked to the encoding sequences. See, for example, PCT International Publication No. WO94/12650, PCT International Publication No. WO92/20808, and PCT International Publication No. WO91/09955. It is also contemplated that, in addition to heterologous promoter DNA, amplifiable marker DNA (*e.g.*, *ada*, *dhfr*, and the multifunctional CAD gene which encodes carbamyl phosphate synthase, aspartate transcarbamylase, and dihydroorotase) and/or intron DNA may be inserted along with the heterologous promoter DNA. If linked to the coding sequence, amplification of the marker DNA by standard selection methods results in co-amplification of the desired protein coding sequences in the cells.

The host cell can be a higher eukaryotic host cell, such as a mammalian cell, a lower eukaryotic host cell, such as a yeast cell, or the host cell can be a prokaryotic cell, such as a bacterial cell. Introduction of the recombinant construct into the host cell can be effected by calcium phosphate transfection, DEAE, dextran mediated transfection, or electroporation (Davis, L. et al., *Basic Methods in Molecular Biology* (1986)). The host cells containing one of the polynucleotides of the invention, can be used in conventional manners to produce the gene product encoded by the isolated fragment (in the case of an ORF) or can be used to produce a heterologous protein under the control of the EMF.

Any host/vector system can be used to express one or more of the ORFs of the present invention. These include, but are not limited to, eukaryotic hosts such as HeLa cells, Cv-1 cell, COS cells, 293 cells, and Sf9 cells, as well as prokaryotic host such as *E. coli* and *B. subtilis*. The most preferred cells are those which do not normally express the particular polypeptide or protein or which expresses the polypeptide or protein at low natural level. Mature proteins can be expressed in mammalian cells, yeast, bacteria, or other cells under the control of appropriate promoters. Cell-free translation systems can also be employed to produce such proteins using RNAs derived from the DNA constructs of the present invention. Appropriate cloning and expression vectors for use with prokaryotic and eukaryotic hosts are described by Sambrook, et al., in *Molecular Cloning: A Laboratory Manual*, Second Edition, Cold Spring Harbor, New York (1989), the disclosure of which is hereby incorporated by reference.

Various mammalian cell culture systems can also be employed to express recombinant protein. Examples of mammalian expression systems include the COS-7 lines of monkey kidney fibroblasts, described by Gluzman, *Cell* 23:175 (1981). Other cell lines capable of expressing a compatible vector are, for example, the C127, monkey COS cells, Chinese Hamster Ovary (CHO) cells, human kidney 293 cells, human epidermal A431 cells, human Colo205 cells, 3T3

cells, CV-1 cells, other transformed primate cell lines, normal diploid cells, cell strains derived from *in vitro* culture of primary tissue, primary explants, HeLa cells, mouse L cells, BHK, HL-60, U937, HaK or Jurkat cells. Mammalian expression vectors will comprise an origin of replication, a suitable promoter and also any necessary ribosome binding sites, polyadenylation site, splice donor and acceptor sites, transcriptional termination sequences, and 5' flanking nontranscribed sequences. DNA sequences derived from the SV40 viral genome, for example, SV40 origin, early promoter, enhancer, splice, and polyadenylation sites may be used to provide the required nontranscribed genetic elements. Recombinant polypeptides and proteins produced in bacterial culture are usually isolated by initial extraction from cell pellets, followed by one or more salting-out, aqueous ion exchange or size exclusion chromatography steps. Protein refolding steps can be used, as necessary, in completing configuration of the mature protein. Finally, high performance liquid chromatography (HPLC) can be employed for final purification steps. Microbial cells employed in expression of proteins can be disrupted by any convenient method, including freeze-thaw cycling, sonication, mechanical disruption, or use of cell lysing agents.

Alternatively, it may be possible to produce the protein in lower eukaryotes such as yeast or insects or in prokaryotes such as bacteria. Potentially suitable yeast strains include *Saccharomyces cerevisiae*, *Schizosaccharomyces pombe*, *Kluyveromyces* strains, *Candida*, or any yeast strain capable of expressing heterologous proteins. Potentially suitable bacterial strains include *Escherichia coli*, *Bacillus subtilis*, *Salmonella typhimurium*, or any bacterial strain capable of expressing heterologous proteins. If the protein is made in yeast or bacteria, it may be necessary to modify the protein produced therein, for example by phosphorylation or glycosylation of the appropriate sites, in order to obtain the functional protein. Such covalent attachments may be accomplished using known chemical or enzymatic methods.

In another embodiment of the present invention, cells and tissues may be engineered to express an endogenous gene comprising the polynucleotides of the invention under the control of inducible regulatory elements, in which case the regulatory sequences of the endogenous gene may be replaced by homologous recombination. As described herein, gene targeting can be used to replace a gene's existing regulatory region with a regulatory sequence isolated from a different gene or a novel regulatory sequence synthesized by genetic engineering methods. Such regulatory sequences may be comprised of promoters, enhancers, scaffold-attachment regions, negative regulatory elements, transcriptional initiation sites, regulatory protein binding sites or combinations of said sequences. Alternatively, sequences which affect the structure or stability of the RNA or protein produced may be replaced, removed, added, or otherwise modified by targeting. These sequence include polyadenylation signals, mRNA stability elements, splice

sites, leader sequences for enhancing or modifying transport or secretion properties of the protein, or other sequences which alter or improve the function or stability of protein or RNA molecules.

The targeting event may be a simple insertion of the regulatory sequence, placing the gene under the control of the new regulatory sequence, *e.g.*, inserting a new promoter or enhancer or both upstream of a gene. Alternatively, the targeting event may be a simple deletion of a regulatory element, such as the deletion of a tissue-specific negative regulatory element. Alternatively, the targeting event may replace an existing element; for example, a tissue-specific enhancer can be replaced by an enhancer that has broader or different cell-type specificity than the naturally occurring elements. Here, the naturally occurring sequences are deleted and new sequences are added. In all cases, the identification of the targeting event may be facilitated by the use of one or more selectable marker genes that are contiguous with the targeting DNA, allowing for the selection of cells in which the exogenous DNA has integrated into the host cell genome. The identification of the targeting event may also be facilitated by the use of one or more marker genes exhibiting the property of negative selection, such that the negatively selectable marker is linked to the exogenous DNA, but configured such that the negatively selectable marker flanks the targeting sequence, and such that a correct homologous recombination event with sequences in the host cell genome does not result in the stable integration of the negatively selectable marker. Markers useful for this purpose include the Herpes Simplex Virus thymidine kinase (TK) gene or the bacterial xanthine-guanine phosphoribosyl-transferase (gpt) gene.

The gene targeting or gene activation techniques which can be used in accordance with this aspect of the invention are more particularly described in U.S. Patent No. 5,272,071 to Chappel; U.S. Patent No. 5,578,461 to Sherwin et al.; International Application No. PCT/US92/09627 (WO93/09222) by Selden et al.; and International Application No. PCT/US90/06436 (WO91/06667) by Skoultchi et al., each of which is incorporated by reference herein in its entirety.

4.6 POLYPEPTIDES OF THE INVENTION

The isolated polypeptides of the invention include, but are not limited to, a polypeptide comprising: the amino acid sequences set forth as any one of SEQ ID NO: 8052-16102 or an amino acid sequence encoded by any one of the nucleotide sequences SEQ ID NO: 1-8051 or the corresponding full length or mature protein. Polypeptides of the invention also include polypeptides preferably with biological or immunological activity that are encoded by: (a) a polynucleotide having any one of the nucleotide sequences set forth in SEQ ID NO: 1-8051 or

(b) polynucleotides encoding any one of the amino acid sequences set forth as SEQ ID NO: 8052-16102 or (c) polynucleotides that hybridize to the complement of the polynucleotides of either (a) or (b) under stringent hybridization conditions. The invention also provides biologically active or immunologically active variants of any of the amino acid sequences set forth as SEQ ID NO: 8052-16102 or the corresponding full length or mature protein; and "substantial equivalents" thereof (*e.g.*, with at least about 65%, at least about 70%, at least about 75%, at least about 80%, at least about 85%, 86%, 87%, 88%, 89%, at least about 90%, 91%, 92%, 93%, 94%, typically at least about 95%, 96%, 97%, more typically at least about 98%, or most typically at least about 99% amino acid identity) that retain biological activity.

Polypeptides encoded by allelic variants may have a similar, increased, or decreased activity compared to polypeptides comprising SEQ ID NO: 8052-16102.

Fragments of the proteins of the present invention which are capable of exhibiting biological activity are also encompassed by the present invention. Fragments of the protein may be in linear form or they may be cyclized using known methods, for example, as described in H. U. Saragovi, *et al.*, *Bio/Technology* 10, 773-778 (1992) and in R. S. McDowell, *et al.*, *J. Amer. Chem. Soc.* 114, 9245-9253 (1992), both of which are incorporated herein by reference. Such fragments may be fused to carrier molecules such as immunoglobulins for many purposes, including increasing the valency of protein binding sites.

The present invention also provides both full-length and mature forms (for example, without a signal sequence or precursor sequence) of the disclosed proteins. The protein coding sequence is identified in the sequence listing by translation of the disclosed nucleotide sequences. The mature form of such protein may be obtained by expression of a full-length polynucleotide in a suitable mammalian cell or other host cell. The sequence of the mature form of the protein is also determinable from the amino acid sequence of the full-length form. Where proteins of the present invention are membrane bound, soluble forms of the proteins are also provided. In such forms, part or all of the regions causing the proteins to be membrane bound are deleted so that the proteins are fully secreted from the cell in which they are expressed.

Protein compositions of the present invention may further comprise an acceptable carrier, such as a hydrophilic, *e.g.*, pharmaceutically acceptable, carrier.

The present invention further provides isolated polypeptides encoded by the nucleic acid fragments of the present invention or by degenerate variants of the nucleic acid fragments of the present invention. By "degenerate variant" is intended nucleotide fragments which differ from a nucleic acid fragment of the present invention (*e.g.*, an ORF) by nucleotide sequence but, due to the degeneracy of the genetic code, encode an identical polypeptide sequence. Preferred nucleic acid fragments of the present invention are the ORFs that encode proteins.

A variety of methodologies known in the art can be utilized to obtain any one of the isolated polypeptides or proteins of the present invention. At the simplest level, the amino acid sequence can be synthesized using commercially available peptide synthesizers. The synthetically-constructed protein sequences, by virtue of sharing primary, secondary or tertiary structural and/or conformational characteristics with proteins may possess biological properties in common therewith, including protein activity. This technique is particularly useful in producing small peptides and fragments of larger polypeptides. Fragments are useful, for example, in generating antibodies against the native polypeptide. Thus, they may be employed as biologically active or immunological substitutes for natural, purified proteins in screening of therapeutic compounds and in immunological processes for the development of antibodies.

The polypeptides and proteins of the present invention can alternatively be purified from cells which have been altered to express the desired polypeptide or protein. As used herein, a cell is said to be altered to express a desired polypeptide or protein when the cell, through genetic manipulation, is made to produce a polypeptide or protein which it normally does not produce or which the cell normally produces at a lower level. One skilled in the art can readily adapt procedures for introducing and expressing either recombinant or synthetic sequences into eukaryotic or prokaryotic cells in order to generate a cell which produces one of the polypeptides or proteins of the present invention.

The invention also relates to methods for producing a polypeptide comprising growing a culture of host cells of the invention in a suitable culture medium, and purifying the protein from the cells or the culture in which the cells are grown. For example, the methods of the invention include a process for producing a polypeptide in which a host cell containing a suitable expression vector that includes a polynucleotide of the invention is cultured under conditions that allow expression of the encoded polypeptide. The polypeptide can be recovered from the culture, conveniently from the culture medium, or from a lysate prepared from the host cells and further purified. Preferred embodiments include those in which the protein produced by such process is a full length or mature form of the protein.

In an alternative method, the polypeptide or protein is purified from bacterial cells which naturally produce the polypeptide or protein. One skilled in the art can readily follow known methods for isolating polypeptides and proteins in order to obtain one of the isolated polypeptides or proteins of the present invention. These include, but are not limited to, immunochromatography, HPLC, size-exclusion chromatography, ion-exchange chromatography, and immuno-affinity chromatography. See, e.g., Scopes, *Protein Purification: Principles and Practice*, Springer-Verlag (1994); Sambrook, et al., in *Molecular Cloning: A Laboratory Manual*; Ausubel et al., *Current Protocols in Molecular Biology*. Polypeptide fragments that

retain biological/immunological activity include fragments comprising greater than about 100 amino acids, or greater than about 200 amino acids, and fragments that encode specific protein domains.

The purified polypeptides can be used in *in vitro* binding assays which are well known in the art to identify molecules which bind to the polypeptides. These molecules include but are not limited to, for *e.g.*, small molecules, molecules from combinatorial libraries, antibodies or other proteins. The molecules identified in the binding assay are then tested for antagonist or agonist activity in *in vivo* tissue culture or animal models that are well known in the art. In brief, the molecules are titrated into a plurality of cell cultures or animals and then tested for either cell/animal death or prolonged survival of the animal/cells.

In addition, the peptides of the invention or molecules capable of binding to the peptides may be complexed with toxins, *e.g.*, ricin or cholera, or with other compounds that are toxic to cells. The toxin-binding molecule complex is then targeted to a tumor or other cell by the specificity of the binding molecule for SEQ ID NO: 8052-16102.

The protein of the invention may also be expressed as a product of transgenic animals, *e.g.*, as a component of the milk of transgenic cows, goats, pigs, or sheep which are characterized by somatic or germ cells containing a nucleotide sequence encoding the protein.

The proteins provided herein also include proteins characterized by amino acid sequences similar to those of purified proteins but into which modification are naturally provided or deliberately engineered. For example, modifications in the peptide or DNA sequence can be made by those skilled in the art using known techniques. Modifications of interest in the protein sequences may include the alteration, substitution, replacement, insertion or deletion of a selected amino acid residue in the coding sequence. For example, one or more of the cysteine residues may be deleted or replaced with another amino acid to alter the conformation of the molecule. Techniques for such alteration, substitution, replacement, insertion or deletion are well known to those skilled in the art (see, *e.g.*, U.S. Pat. No. 4,518,584). Preferably, such alteration, substitution, replacement, insertion or deletion retains the desired activity of the protein. Regions of the protein that are important for the protein function can be determined by various methods known in the art including the alanine-scanning method which involved systematic substitution of single or strings of amino acids with alanine, followed by testing the resulting alanine-containing variant for biological activity. This type of analysis determines the importance of the substituted amino acid(s) in biological activity. Regions of the protein that are important for protein function may be determined by the eMATRIX program.

Other fragments and derivatives of the sequences of proteins which would be expected to retain protein activity in whole or in part and are useful for screening or other immunological

methodologies may also be easily made by those skilled in the art given the disclosures herein. Such modifications are encompassed by the present invention.

The protein may also be produced by operably linking the isolated polynucleotide of the invention to suitable control sequences in one or more insect expression vectors, and employing
5 an insect expression system. Materials and methods for baculovirus/insect cell expression systems are commercially available in kit form from, *e.g.*, Invitrogen, San Diego, Calif., U.S.A. (the MaxBat™ kit), and such methods are well known in the art, as described in Summers and Smith, Texas Agricultural Experiment Station Bulletin No. 1555 (1987), incorporated herein by reference. As used herein, an insect cell capable of expressing a polynucleotide of the present
10 invention is "transformed."

The protein of the invention may be prepared by culturing transformed host cells under culture conditions suitable to express the recombinant protein. The resulting expressed protein may then be purified from such culture (*i.e.*, from culture medium or cell extracts) using known purification processes, such as gel filtration and ion exchange chromatography. The purification
15 of the protein may also include an affinity column containing agents which will bind to the protein; one or more column steps over such affinity resins as concanavalin A-agarose, heparin-toyopearl™ or Cibacrom blue 3GA Sepharose™; one or more steps involving hydrophobic interaction chromatography using such resins as phenyl ether, butyl ether, or propyl ether; or immunoaffinity chromatography.

Alternatively, the protein of the invention may also be expressed in a form that will
20 facilitate purification. For example, it may be expressed as a fusion protein, such as those of maltose binding protein (MBP), glutathione-S-transferase (GST) or thioredoxin (TRX), or as a His-tag. Kits for expression and purification of such fusion proteins are commercially available from New England BioLab (Beverly, Mass.), Pharmacia (Piscataway, N.J.) and Invitrogen,
25 respectively. The protein can also be tagged with an epitope and subsequently purified by using a specific antibody directed to such epitope. One such epitope ("FLAG®") is commercially available from Kodak (New Haven, Conn.).

Finally, one or more reverse-phase high performance liquid chromatography (RP- HPLC) steps employing hydrophobic RP-HPLC media, *e.g.*, silica gel having pendant methyl or other
30 aliphatic groups, can be employed to further purify the protein. Some or all of the foregoing purification steps, in various combinations, can also be employed to provide a substantially homogeneous isolated recombinant protein. The protein thus purified is substantially free of other mammalian proteins and is defined in accordance with the present invention as an "isolated protein."

The polypeptides of the invention include analogs (variants). This embraces fragments, as well as peptides in which one or more amino acids has been deleted, inserted, or substituted. Also, analogs of the polypeptides of the invention embrace fusions of the polypeptides or modifications of the polypeptides of the invention, wherein the polypeptide or analog is fused to another moiety or moieties, *e.g.*, targeting moiety or another therapeutic agent. Such analogs may exhibit improved properties such as activity and/or stability. Examples of moieties which may be fused to the polypeptide or an analog include, for example, targeting moieties which provide for the delivery of polypeptide to pancreatic cells, *e.g.*, antibodies to pancreatic cells, antibodies to immune cells such as T-cells, monocytes, dendritic cells, granulocytes, etc., as well as receptor and ligands expressed on pancreatic or immune cells. Other moieties which may be fused to the polypeptide include therapeutic agents which are used for treatment, for example, immunosuppressive drugs such as cyclosporin, SK506, azathioprine, CD3 antibodies and steroids. Also, polypeptides may be fused to immune modulators, and other cytokines such as alpha or beta interferon.

4.6.1 DETERMINING POLYPEPTIDE AND POLYNUCLEOTIDE IDENTITY AND SIMILARITY

Preferred identity and/or similarity are designed to give the largest match between the sequences tested. Methods to determine identity and similarity are codified in computer programs including, but are not limited to, the GCG program package, including GAP (Devereux, J., et al., *Nucleic Acids Research* 12(1):387 (1984); Genetics Computer Group, University of Wisconsin, Madison, WI), BLASTP, BLASTN, BLASTX, FASTA (Altschul, S.F. et al., *J. Molec. Biol.* 215:403-410 (1990), PSI-BLAST (Altschul S.F. et al., *Nucleic Acids Res.* vol. 25, pp. 3389-3402, herein incorporated by reference), eMatrix software (Wu et al., *J. Comp. Biol.*, Vol. 6, pp. 219-235 (1999), herein incorporated by reference), eMotif software (Nevill-Manning et al, *ISMB-97*, Vol. 4, pp. 202-209, herein incorporated by reference), pFam software (Sonnhammer et al., *Nucleic Acids Res.*, Vol. 26(1), pp. 320-322 (1998), herein incorporated by reference) and the Kyte-Doolittle hydrophobicity prediction algorithm (*J. Mol Biol*, 157, pp. 105-31 (1982), incorporated herein by reference). The BLAST programs are publicly available from the National Center for Biotechnology Information (NCBI) and other sources (BLAST Manual, Altschul, S., et al. NCB NLM NIH Bethesda, MD 20894; Altschul, S., et al., *J. Mol. Biol.* 215:403-410 (1990).

4.7 CHIMERIC AND FUSION PROTEINS

The invention also provides chimeric or fusion proteins. As used herein, a "chimeric protein" or "fusion protein" comprises a polypeptide of the invention operatively linked to

another polypeptide. Within a fusion protein the polypeptide according to the invention can correspond to all or a portion of a protein according to the invention. In one embodiment, a fusion protein comprises at least one biologically active portion of a protein according to the invention. In another embodiment, a fusion protein comprises at least two biologically active portions of a protein according to the invention. Within the fusion protein, the term "operatively linked" is intended to indicate that the polypeptide according to the invention and the other polypeptide are fused in-frame to each other. The polypeptide can be fused to the N-terminus or C-terminus.

For example, in one embodiment a fusion protein comprises a polypeptide according to the invention operably linked to the extracellular domain of a second protein.

In another embodiment, the fusion protein is a GST-fusion protein in which the polypeptide sequences of the invention are fused to the C-terminus of the GST (*i.e.*, glutathione S-transferase) sequences.

In another embodiment, the fusion protein is an immunoglobulin fusion protein in which the polypeptide sequences according to the invention comprises one or more domains are fused to sequences derived from a member of the immunoglobulin protein family. The immunoglobulin fusion proteins of the invention can be incorporated into pharmaceutical compositions and administered to a subject to inhibit an interaction between a ligand and a protein of the invention on the surface of a cell, to thereby suppress signal transduction *in vivo*.

The immunoglobulin fusion proteins can be used to affect the bioavailability of a cognate ligand. Inhibition of the ligand/protein interaction may be useful therapeutically for both the treatment of proliferative and differentiative disorders, *e.g.*, cancer as well as modulating (*e.g.*, promoting or inhibiting) cell survival. Moreover, the immunoglobulin fusion proteins of the invention can be used as immunogens to produce antibodies in a subject, to purify ligands, and in screening assays to identify molecules that inhibit the interaction of a polypeptide of the invention with a ligand.

A chimeric or fusion protein of the invention can be produced by standard recombinant DNA techniques. For example, DNA fragments coding for the different polypeptide sequences are ligated together in-frame in accordance with conventional techniques, *e.g.*, by employing blunt-ended or stagger-ended termini for ligation, restriction enzyme digestion to provide for appropriate termini, filling-in of cohesive ends as appropriate, alkaline phosphatase treatment to avoid undesirable joining, and enzymatic ligation. In another embodiment, the fusion gene can be synthesized by conventional techniques including automated DNA synthesizers.

Alternatively, PCR amplification of gene fragments can be carried out using anchor primers that give rise to complementary overhangs between two consecutive gene fragments that can subsequently be annealed and reamplified to generate a chimeric gene sequence (see, for

example, Ausubel et al. (eds.) CURRENT PROTOCOLS IN MOLECULAR BIOLOGY, John Wiley & Sons, 1992). Moreover, many expression vectors are commercially available that already encode a fusion moiety (e.g., a GST polypeptide). A nucleic acid encoding a polypeptide of the invention can be cloned into such an expression vector such that the fusion moiety is linked in-frame to the protein of the invention.

4.8 GENE THERAPY

Mutations in the polynucleotides of the invention gene may result in loss of normal function of the encoded protein. The invention thus provides gene therapy to restore normal activity of the polypeptides of the invention; or to treat disease states involving polypeptides of the invention. Delivery of a functional gene encoding polypeptides of the invention to appropriate cells is effected *ex vivo*, *in situ*, or *in vivo* by use of vectors, and more particularly viral vectors (e.g., adenovirus, adeno-associated virus, or a retrovirus), or *ex vivo* by use of physical DNA transfer methods (e.g., liposomes or chemical treatments). See, for example, Anderson, Nature, supplement to vol. 392, no. 6679, pp.25-20 (1998). For additional reviews of gene therapy technology see Friedmann, Science, 244: 1275-1281 (1989); Verma, Scientific American: 68-84 (1990); and Miller, Nature, 357: 455-460 (1992). Introduction of any one of the nucleotides of the present invention or a gene encoding the polypeptides of the present invention can also be accomplished with extrachromosomal substrates (transient expression) or artificial chromosomes (stable expression). Cells may also be cultured *ex vivo* in the presence of proteins of the present invention in order to proliferate or to produce a desired effect on or activity in such cells. Treated cells can then be introduced *in vivo* for therapeutic purposes. Alternatively, it is contemplated that in other human disease states, preventing the expression of or inhibiting the activity of polypeptides of the invention will be useful in treating the disease states. It is contemplated that antisense therapy or gene therapy could be applied to negatively regulate the expression of polypeptides of the invention.

Other methods inhibiting expression of a protein include the introduction of antisense molecules to the nucleic acids of the present invention, their complements, or their translated RNA sequences, by methods known in the art. Further, the polypeptides of the present invention can be inhibited by using targeted deletion methods, or the insertion of a negative regulatory element such as a silencer, which is tissue specific.

The present invention still further provides cells genetically engineered *in vivo* to express the polynucleotides of the invention, wherein such polynucleotides are in operative association with a regulatory sequence heterologous to the host cell which drives expression of the polynucleotides in

the cell. These methods can be used to increase or decrease the expression of the polynucleotides of the present invention.

Knowledge of DNA sequences provided by the invention allows for modification of cells to permit, increase, or decrease, expression of endogenous polypeptide. Cells can be modified (*e.g.*,
5 by homologous recombination) to provide increased polypeptide expression by replacing, in whole or in part, the naturally occurring promoter with all or part of a heterologous promoter so that the cells express the protein at higher levels. The heterologous promoter is inserted in such a manner that it is operatively linked to the desired protein encoding sequences. See, for example, PCT International Publication No. WO 94/12650, PCT International Publication No. WO 92/20808, and
10 PCT International Publication No. WO 91/09955. It is also contemplated that, in addition to heterologous promoter DNA, amplifiable marker DNA (*e.g.*, *ada*, *dhfr*, and the multifunctional CAD gene which encodes carbamyl phosphate synthase, aspartate transcarbamylase, and dihydroorotase) and/or intron DNA may be inserted along with the heterologous promoter DNA. If linked to the desired protein coding sequence, amplification of the marker DNA by standard
15 selection methods results in co-amplification of the desired protein coding sequences in the cells.

In another embodiment of the present invention, cells and tissues may be engineered to express an endogenous gene comprising the polynucleotides of the invention under the control of inducible regulatory elements, in which case the regulatory sequences of the endogenous gene may be replaced by homologous recombination. As described herein, gene targeting can be used to
20 replace a gene's existing regulatory region with a regulatory sequence isolated from a different gene or a novel regulatory sequence synthesized by genetic engineering methods. Such regulatory sequences may be comprised of promoters, enhancers, scaffold-attachment regions, negative regulatory elements, transcriptional initiation sites, regulatory protein binding sites or combinations of said sequences. Alternatively, sequences which affect the structure or stability of the RNA or
25 protein produced may be replaced, removed, added, or otherwise modified by targeting. These sequences include polyadenylation signals, mRNA stability elements, splice sites, leader sequences for enhancing or modifying transport or secretion properties of the protein, or other sequences which alter or improve the function or stability of protein or RNA molecules.

The targeting event may be a simple insertion of the regulatory sequence, placing the gene
30 under the control of the new regulatory sequence, *e.g.*, inserting a new promoter or enhancer or both upstream of a gene. Alternatively, the targeting event may be a simple deletion of a regulatory element, such as the deletion of a tissue-specific negative regulatory element. Alternatively, the targeting event may replace an existing element; for example, a tissue-specific enhancer can be replaced by an enhancer that has broader or different cell-type specificity than the naturally
35 occurring elements. Here, the naturally occurring sequences are deleted and new sequences are

added. In all cases, the identification of the targeting event may be facilitated by the use of one or more selectable marker genes that are contiguous with the targeting DNA, allowing for the selection of cells in which the exogenous DNA has integrated into the cell genome. The identification of the targeting event may also be facilitated by the use of one or more marker genes exhibiting the property of negative selection, such that the negatively selectable marker is linked to the exogenous DNA, but configured such that the negatively selectable marker flanks the targeting sequence, and such that a correct homologous recombination event with sequences in the host cell genome does not result in the stable integration of the negatively selectable marker. Markers useful for this purpose include the Herpes Simplex Virus thymidine kinase (TK) gene or the bacterial xanthine-guanine phosphoribosyl-transferase (gpt) gene.

The gene targeting or gene activation techniques which can be used in accordance with this aspect of the invention are more particularly described in U.S. Patent No. 5,272,071 to Chappel; U.S. Patent No. 5,578,461 to Sherwin et al.; International Application No. PCT/US92/09627 (WO93/09222) by Selden et al.; and International Application No. PCT/US90/06436 (WO91/06667) by Skoultchi et al., each of which is incorporated by reference herein in its entirety.

4.9 TRANSGENIC ANIMALS

In preferred methods to determine biological functions of the polypeptides of the invention in vivo, one or more genes provided by the invention are either over expressed or inactivated in the germ line of animals using homologous recombination [Capecchi, Science 244:1288-1292 (1989)]. Animals in which the gene is over expressed, under the regulatory control of exogenous or endogenous promoter elements, are known as transgenic animals. Animals in which an endogenous gene has been inactivated by homologous recombination are referred to as "knockout" animals. Knockout animals, preferably non-human mammals, can be prepared as described in U.S. Patent No. 5,557,032, incorporated herein by reference.

Transgenic animals are useful to determine the roles polypeptides of the invention play in biological processes, and preferably in disease states. Transgenic animals are useful as model systems to identify compounds that modulate lipid metabolism. Transgenic animals, preferably non-human mammals, are produced using methods as described in U.S. Patent No 5,489,743 and PCT Publication No. WO94/28122, incorporated herein by reference.

Transgenic animals can be prepared wherein all or part of a promoter of the polynucleotides of the invention is either activated or inactivated to alter the level of expression of the polypeptides of the invention. Inactivation can be carried out using homologous recombination methods described above. Activation can be achieved by supplementing or even replacing the homologous promoter to provide for increased protein expression. The

homologous promoter can be supplemented by insertion of one or more heterologous enhancer elements known to confer promoter activation in a particular tissue.

The polynucleotides of the present invention also make possible the development, through, *e.g.*, homologous recombination or knock out strategies, of animals that fail to express polypeptides of the invention or that express a variant polypeptide. Such animals are useful as models for studying the *in vivo* activities of polypeptide as well as for studying modulators of the polypeptides of the invention.

In preferred methods to determine biological functions of the polypeptides of the invention *in vivo*, one or more genes provided by the invention are either over expressed or inactivated in the germ line of animals using homologous recombination [Capecchi, Science 244:1288-1292 (1989)]. Animals in which the gene is over expressed, under the regulatory control of exogenous or endogenous promoter elements, are known as transgenic animals. Animals in which an endogenous gene has been inactivated by homologous recombination are referred to as "knockout" animals. Knockout animals, preferably non-human mammals, can be prepared as described in U.S. Patent No. 5,557,032, incorporated herein by reference.

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Transgenic animals can be prepared wherein all or part of the polynucleotides of the invention promoter is either activated or inactivated to alter the level of expression of the polypeptides of the invention. Inactivation can be carried out using homologous recombination methods described above. Activation can be achieved by supplementing or even replacing the homologous promoter to provide for increased protein expression. The homologous promoter can be supplemented by insertion of one or more heterologous enhancer elements known to confer promoter activation in a particular tissue.

4.10 USES AND BIOLOGICAL ACTIVITY

The polynucleotides and proteins of the present invention are expected to exhibit one or more of the uses or biological activities (including those associated with assays cited herein) identified herein. Uses or activities described for proteins of the present invention may be provided by administration or use of such proteins or of polynucleotides encoding such proteins (such as, for example, in gene therapies or vectors suitable for introduction of DNA). The mechanism underlying the particular condition or pathology will dictate whether the

polypeptides of the invention, the polynucleotides of the invention or modulators (activators or inhibitors) thereof would be beneficial to the subject in need of treatment. Thus, "therapeutic compositions of the invention" include compositions comprising isolated polynucleotides (including recombinant DNA molecules, cloned genes and degenerate variants thereof) or polypeptides of the invention (including full length protein, mature protein and truncations or domains thereof), or compounds and other substances that modulate the overall activity of the target gene products, either at the level of target gene/protein expression or target protein activity. Such modulators include polypeptides, analogs, (variants), including fragments and fusion proteins, antibodies and other binding proteins; chemical compounds that directly or indirectly activate or inhibit the polypeptides of the invention (identified, *e.g.*, via drug screening assays as described herein); antisense polynucleotides and polynucleotides suitable for triple helix formation; and in particular antibodies or other binding partners that specifically recognize one or more epitopes of the polypeptides of the invention.

The polypeptides of the present invention may likewise be involved in cellular activation or in one of the other physiological pathways described herein.

4.10.1 RESEARCH USES AND UTILITIES

The polynucleotides provided by the present invention can be used by the research community for various purposes. The polynucleotides can be used to express recombinant protein for analysis, characterization or therapeutic use; as markers for tissues in which the corresponding protein is preferentially expressed (either constitutively or at a particular stage of tissue differentiation or development or in disease states); as molecular weight markers on gels; as chromosome markers or tags (when labeled) to identify chromosomes or to map related gene positions; to compare with endogenous DNA sequences in patients to identify potential genetic disorders; as probes to hybridize and thus discover novel, related DNA sequences; as a source of information to derive PCR primers for genetic fingerprinting; as a probe to "subtract-out" known sequences in the process of discovering other novel polynucleotides; for selecting and making oligomers for attachment to a "gene chip" or other support, including for examination of expression patterns; to raise anti-protein antibodies using DNA immunization techniques; and as an antigen to raise anti-DNA antibodies or elicit another immune response. Where the polynucleotide encodes a protein which binds or potentially binds to another protein (such as, for example, in a receptor-ligand interaction), the polynucleotide can also be used in interaction trap assays (such as, for example, that described in Gyuris et al., Cell 75:791-803 (1993)) to identify polynucleotides encoding the other protein with which binding occurs or to identify inhibitors of the binding interaction.

The polypeptides provided by the present invention can similarly be used in assays to determine biological activity, including in a panel of multiple proteins for high-throughput screening; to raise antibodies or to elicit another immune response; as a reagent (including the labeled reagent) in assays designed to quantitatively determine levels of the protein (or its
5 receptor) in biological fluids; as markers for tissues in which the corresponding polypeptide is preferentially expressed (either constitutively or at a particular stage of tissue differentiation or development or in a disease state); and, of course, to isolate correlative receptors or ligands. Proteins involved in these binding interactions can also be used to screen for peptide or small molecule inhibitors or agonists of the binding interaction.

10 Any or all of these research utilities are capable of being developed into reagent grade or kit format for commercialization as research products.

Methods for performing the uses listed above are well known to those skilled in the art. References disclosing such methods include without limitation "Molecular Cloning: A Laboratory Manual", 2d ed., Cold Spring Harbor Laboratory Press, Sambrook, J., E. F. Fritsch
15 and T. Maniatis eds., 1989, and "Methods in Enzymology: Guide to Molecular Cloning Techniques", Academic Press, Berger, S. L. and A. R. Kimmel eds., 1987.

4.10.2 NUTRITIONAL USES

Polynucleotides and polypeptides of the present invention can also be used as nutritional
20 sources or supplements. Such uses include without limitation use as a protein or amino acid supplement, use as a carbon source, use as a nitrogen source and use as a source of carbohydrate. In such cases the polypeptide or polynucleotide of the invention can be added to the feed of a particular organism or can be administered as a separate solid or liquid preparation, such as in the form of powder, pills, solutions, suspensions or capsules. In the case of microorganisms, the
25 polypeptide or polynucleotide of the invention can be added to the medium in or on which the microorganism is cultured.

4.10.3 CYTOKINE AND CELL PROLIFERATION/DIFFERENTIATION ACTIVITY

30 A polypeptide of the present invention may exhibit activity relating to cytokine, cell proliferation (either inducing or inhibiting) or cell differentiation (either inducing or inhibiting) activity or may induce production of other cytokines in certain cell populations. A polynucleotide of the invention can encode a polypeptide exhibiting such attributes. Many protein factors discovered to date, including all known cytokines, have exhibited activity in one
35 or more factor-dependent cell proliferation assays, and hence the assays serve as a convenient

confirmation of cytokine activity. The activity of therapeutic compositions of the present invention is evidenced by any one of a number of routine factor dependent cell proliferation assays for cell lines including, without limitation, 32D, DA2, DA1G, T10, B9, B9/11, BaF3, MC9/G, M+(preB M+), 2E8, RB5, DA1, 123, T1165, HT2, CTLL2, TF-1, Mo7e, CMK,

5 HUVEC, and Caco. Therapeutic compositions of the invention can be used in the following:

Assays for T-cell or thymocyte proliferation include without limitation those described in: Current Protocols in Immunology, Ed by J. E. Coligan, A. M. Kruisbeek, D. H. Margulies, E. M. Shevach, W. Strober, Pub. Greene Publishing Associates and Wiley-Interscience (Chapter 3, *In Vitro* assays for Mouse Lymphocyte Function 3.1-3.19; Chapter 7, Immunologic studies in
10 Humans); Takai et al., J. Immunol. 137:3494-3500, 1986; Bertagnolli et al., J. Immunol. 145:1706-1712, 1990; Bertagnolli et al., Cellular Immunology 133:327-341, 1991; Bertagnolli, et al., I. Immunol. 149:3778-3783, 1992; Bowman et al., I. Immunol. 152:1756-1761, 1994.

Assays for cytokine production and/or proliferation of spleen cells, lymph node cells or thymocytes include, without limitation, those described in: Polyclonal T cell stimulation,
15 Kruisbeek, A. M. and Shevach, E. M. In Current Protocols in Immunology. J. E. e.a. Coligan eds. Vol 1 pp. 3.12.1-3.12.14, John Wiley and Sons, Toronto. 1994; and Measurement of mouse and human interleukin- γ , Schreiber, R. D. In Current Protocols in Immunology. J. E. e.a. Coligan eds. Vol 1 pp. 6.8.1-6.8.8, John Wiley and Sons, Toronto. 1994.

Assays for proliferation and differentiation of hematopoietic and lymphopoietic cells
20 include, without limitation, those described in: Measurement of Human and Murine Interleukin 2 and Interleukin 4, Bottomly, K., Davis, L. S. and Lipsky, P. E. In Current Protocols in Immunology. J. E. e.a. Coligan eds. Vol 1 pp. 6.3.1-6.3.12, John Wiley and Sons, Toronto. 1991; deVries et al., J. Exp. Med. 173:1205-1211, 1991; Moreau et al., Nature 336:690-692, 1988; Greenberger et al., Proc. Natl. Acad. Sci. U.S.A. 80:2931-2938, 1983; Measurement of mouse
25 and human interleukin 6--Nordan, R. In Current Protocols in Immunology. J. E. Coligan eds. Vol 1 pp. 6.6.1-6.6.5, John Wiley and Sons, Toronto. 1991; Smith et al., Proc. Natl. Aced. Sci. U.S.A. 83:1857-1861, 1986; Measurement of human Interleukin 11--Bennett, F., Giannotti, J., Clark, S. C. and Turner, K. J. In Current Protocols in Immunology. J. E. Coligan eds. Vol 1 pp. 6.15.1 John Wiley and Sons, Toronto. 1991; Measurement of mouse and human Interleukin
30 9--Ciarletta, A., Giannotti, J., Clark, S. C. and Turner, K. J. In Current Protocols in Immunology. J. E. Coligan eds. Vol 1 pp. 6.13.1, John Wiley and Sons, Toronto. 1991.

Assays for T-cell clone responses to antigens (which will identify, among others, proteins that affect APC-T cell interactions as well as direct T-cell effects by measuring proliferation and cytokine production) include, without limitation, those described in: Current Protocols in
35 Immunology, Ed by J. E. Coligan, A. M. Kruisbeek, D. H. Margulies, E. M. Shevach, W Strober,

Pub. Greene Publishing Associates and Wiley-Interscience (Chapter 3, *In Vitro* assays for Mouse Lymphocyte Function; Chapter 6, Cytokines and their cellular receptors; Chapter 7, Immunologic studies in Humans); Weinberger et al., Proc. Natl. Acad. Sci. USA 77:6091-6095, 1980; Weinberger et al., Eur. J. Immun. 11:405-411, 1981; Takai et al., J. Immunol. 137:3494-3500, 1986; Takai et al., J. Immunol. 140:508-512, 1988.

4.10.4 STEM CELL GROWTH FACTOR ACTIVITY

A polypeptide of the present invention may exhibit stem cell growth factor activity and be involved in the proliferation, differentiation and survival of pluripotent and totipotent stem cells including primordial germ cells, embryonic stem cells, hematopoietic stem cells and/or germ line stem cells. Administration of the polypeptide of the invention to stem cells *in vivo* or *ex vivo* is expected to maintain and expand cell populations in a totipotent or pluripotent state which would be useful for re-engineering damaged or diseased tissues, transplantation, manufacture of bio-pharmaceuticals and the development of bio-sensors. The ability to produce large quantities of human cells has important working applications for the production of human proteins which currently must be obtained from non-human sources or donors, implantation of cells to treat diseases such as Parkinson's, Alzheimer's and other neurodegenerative diseases; tissues for grafting such as bone marrow, skin, cartilage, tendons, bone, muscle (including cardiac muscle), blood vessels, cornea, neural cells, gastrointestinal cells and others; and organs for transplantation such as kidney, liver, pancreas (including islet cells), heart and lung.

It is contemplated that multiple different exogenous growth factors and/or cytokines may be administered in combination with the polypeptide of the invention to achieve the desired effect, including any of the growth factors listed herein, other stem cell maintenance factors, and specifically including stem cell factor (SCF), leukemia inhibitory factor (LIF), Flt-3 ligand (Flt-3L), any of the interleukins, recombinant soluble IL-6 receptor fused to IL-6, macrophage inflammatory protein 1-alpha (MIP-1-alpha), G-CSF, GM-CSF, thrombopoietin (TPO), platelet factor 4 (PF-4), platelet-derived growth factor (PDGF), neural growth factors and basic fibroblast growth factor (bFGF).

Since totipotent stem cells can give rise to virtually any mature cell type, expansion of these cells in culture will facilitate the production of large quantities of mature cells. Techniques for culturing stem cells are known in the art and administration of polypeptides of the invention, optionally with other growth factors and/or cytokines, is expected to enhance the survival and proliferation of the stem cell populations. This can be accomplished by direct administration of the polypeptide of the invention to the culture medium. Alternatively, stroma cells transfected with a polynucleotide that encodes for the polypeptide of the invention can be used as a feeder

layer for the stem cell populations in culture or in vivo. Stromal support cells for feeder layers may include embryonic bone marrow fibroblasts, bone marrow stromal cells, fetal liver cells, or cultured embryonic fibroblasts (see U.S. Patent No. 5,690,926).

Stem cells themselves can be transfected with a polynucleotide of the invention to induce
5 autocrine expression of the polypeptide of the invention. This will allow for generation of undifferentiated totipotent/pluripotent stem cell lines that are useful as is or that can then be differentiated into the desired mature cell types. These stable cell lines can also serve as a source of undifferentiated totipotent/pluripotent mRNA to create cDNA libraries and templates for polymerase chain reaction experiments. These studies would allow for the isolation and
10 identification of differentially expressed genes in stem cell populations that regulate stem cell proliferation and/or maintenance.

Expansion and maintenance of totipotent stem cell populations will be useful in the treatment of many pathological conditions. For example, polypeptides of the present invention may be used to manipulate stem cells in culture to give rise to neuroepithelial cells that can be
15 used to augment or replace cells damaged by illness, autoimmune disease, accidental damage or genetic disorders. The polypeptide of the invention may be useful for inducing the proliferation of neural cells and for the regeneration of nerve and brain tissue, *i.e.* for the treatment of central and peripheral nervous system diseases and neuropathies, as well as mechanical and traumatic disorders which involve degeneration, death or trauma to neural cells or nerve tissue. In
20 addition, the expanded stem cell populations can also be genetically altered for gene therapy purposes and to decrease host rejection of replacement tissues after grafting or implantation.

Expression of the polypeptide of the invention and its effect on stem cells can also be manipulated to achieve controlled differentiation of the stem cells into more differentiated cell types. A broadly applicable method of obtaining pure populations of a specific differentiated
25 cell type from undifferentiated stem cell populations involves the use of a cell-type specific promoter driving a selectable marker. The selectable marker allows only cells of the desired type to survive. For example, stem cells can be induced to differentiate into cardiomyocytes (Wobus et al., *Differentiation*, 48: 173-182, (1991); Klug et al., *J. Clin. Invest.*, 98(1): 216-224, (1998)) or skeletal muscle cells (Browder, L. W. In: *Principles of Tissue Engineering eds.* Lanza et al.,
30 Academic Press (1997)). Alternatively, directed differentiation of stem cells can be accomplished by culturing the stem cells in the presence of a differentiation factor such as retinoic acid and an antagonist of the polypeptide of the invention which would inhibit the effects of endogenous stem cell factor activity and allow differentiation to proceed.

In vitro cultures of stem cells can be used to determine if the polypeptide of the invention
35 exhibits stem cell growth factor activity. Stem cells are isolated from any one of various cell

sources (including hematopoietic stem cells and embryonic stem cells) and cultured on a feeder layer, as described by Thompson et al. Proc. Natl. Acad. Sci. U.S.A., 92: 7844-7848 (1995), in the presence of the polypeptide of the invention alone or in combination with other growth factors or cytokines. The ability of the polypeptide of the invention to induce stem cells proliferation is determined by colony formation on semi-solid support *e.g.* as described by Bernstein et al., Blood, 77: 2316-2321 (1991).

4.10.5 HEMATOPOIESIS REGULATING ACTIVITY

A polypeptide of the present invention may be involved in regulation of hematopoiesis and, consequently, in the treatment of myeloid or lymphoid cell disorders. Even marginal biological activity in support of colony forming cells or of factor-dependent cell lines indicates involvement in regulating hematopoiesis, *e.g.* in supporting the growth and proliferation of erythroid progenitor cells alone or in combination with other cytokines, thereby indicating utility, for example, in treating various anemias or for use in conjunction with irradiation/chemotherapy to stimulate the production of erythroid precursors and/or erythroid cells; in supporting the growth and proliferation of myeloid cells such as granulocytes and monocytes/macrophages (*i.e.*, traditional CSF activity) useful, for example, in conjunction with chemotherapy to prevent or treat consequent myelo-suppression; in supporting the growth and proliferation of megakaryocytes and consequently of platelets thereby allowing prevention or treatment of various platelet disorders such as thrombocytopenia, and generally for use in place of or complimentary to platelet transfusions; and/or in supporting the growth and proliferation of hematopoietic stem cells which are capable of maturing to any and all of the above-mentioned hematopoietic cells and therefore find therapeutic utility in various stem cell disorders (such as those usually treated with transplantation, including, without limitation, aplastic anemia and paroxysmal nocturnal hemoglobinuria), as well as in repopulating the stem cell compartment post irradiation/chemotherapy, either *in-vivo* or *ex-vivo* (*i.e.*, in conjunction with bone marrow transplantation or with peripheral progenitor cell transplantation (homologous or heterologous)) as normal cells or genetically manipulated for gene therapy.

Therapeutic compositions of the invention can be used in the following:

Suitable assays for proliferation and differentiation of various hematopoietic lines are cited above.

Assays for embryonic stem cell differentiation (which will identify, among others, proteins that influence embryonic differentiation hematopoiesis) include, without limitation, those described in: Johansson et al. Cellular Biology 15:141-151, 1995; Keller et al., Molecular and Cellular Biology 13:473-486, 1993; McClanahan et al., Blood 81:2903-2915, 1993.

Assays for stem cell survival and differentiation (which will identify, among others, proteins that regulate lympho-hematopoiesis) include, without limitation, those described in: Methylcellulose colony forming assays, Freshney, M. G. In Culture of Hematopoietic Cells. R. I. Freshney, et al. eds. Vol pp. 265-268, Wiley-Liss, Inc., New York, N.Y. 1994; Hirayama et al.,
5 Proc. Natl. Acad. Sci. USA 89:5907-5911, 1992; Primitive hematopoietic colony forming cells with high proliferative potential, McNiece, I. K. and Briddell, R. A. In Culture of Hematopoietic Cells. R. I. Freshney, et al. eds. Vol pp. 23-39, Wiley-Liss, Inc., New York, N.Y. 1994; Neben et al., Experimental Hematology 22:353-359, 1994; Cobblestone area forming cell assay, Ploemacher, R. E. In Culture of Hematopoietic Cells. R. I. Freshney, et al. eds. Vol pp. 1-21,
10 Wiley-Liss, Inc., New York, N.Y. 1994; Long term bone marrow cultures in the presence of stromal cells, Spooncer, E., Dexter, M. and Allen, T. In Culture of Hematopoietic Cells. R. I. Freshney, et al. eds. Vol pp. 163-179, Wiley-Liss, Inc., New York, N.Y. 1994; Long term culture initiating cell assay, Sutherland, H. J. In Culture of Hematopoietic Cells. R. I. Freshney, et al. eds. Vol pp. 139-162, Wiley-Liss, Inc., New York, N.Y. 1994.

4.10.6 TISSUE GROWTH ACTIVITY

A polypeptide of the present invention also may be involved in bone, cartilage, tendon, ligament and/or nerve tissue growth or regeneration, as well as in wound healing and tissue repair and replacement, and in healing of burns, incisions and ulcers.

20 A polypeptide of the present invention which induces cartilage and/or bone growth in circumstances where bone is not normally formed, has application in the healing of bone fractures and cartilage damage or defects in humans and other animals. Compositions of a polypeptide, antibody, binding partner, or other modulator of the invention may have prophylactic use in closed as well as open fracture reduction and also in the improved fixation of
25 artificial joints. De novo bone formation induced by an osteogenic agent contributes to the repair of congenital, trauma induced, or oncologic resection induced craniofacial defects, and also is useful in cosmetic plastic surgery.

A polypeptide of this invention may also be involved in attracting bone-forming cells, stimulating growth of bone-forming cells, or inducing differentiation of progenitors of
30 bone-forming cells. Treatment of osteoporosis, osteoarthritis, bone degenerative disorders, or periodontal disease, such as through stimulation of bone and/or cartilage repair or by blocking inflammation or processes of tissue destruction (collagenase activity, osteoclast activity, etc.) mediated by inflammatory processes may also be possible using the composition of the invention.

Another category of tissue regeneration activity that may involve the polypeptide of the present invention is tendon/ligament formation. Induction of tendon/ligament-like tissue or other tissue formation in circumstances where such tissue is not normally formed, has application in the healing of tendon or ligament tears, deformities and other tendon or ligament defects in humans and other animals. Such a preparation employing a tendon/ligament-like tissue inducing protein may have prophylactic use in preventing damage to tendon or ligament tissue, as well as use in the improved fixation of tendon or ligament to bone or other tissues, and in repairing defects to tendon or ligament tissue. De novo tendon/ligament-like tissue formation induced by a composition of the present invention contributes to the repair of congenital, trauma induced, or other tendon or ligament defects of other origin, and is also useful in cosmetic plastic surgery for attachment or repair of tendons or ligaments. The compositions of the present invention may provide environment to attract tendon- or ligament-forming cells, stimulate growth of tendon- or ligament-forming cells, induce differentiation of progenitors of tendon- or ligament-forming cells, or induce growth of tendon/ligament cells or progenitors *ex vivo* for return *in vivo* to effect tissue repair. The compositions of the invention may also be useful in the treatment of tendinitis, carpal tunnel syndrome and other tendon or ligament defects. The compositions may also include an appropriate matrix and/or sequestering agent as a carrier as is well known in the art.

The compositions of the present invention may also be useful for proliferation of neural cells and for regeneration of nerve and brain tissue, *i.e.* for the treatment of central and peripheral nervous system diseases and neuropathies, as well as mechanical and traumatic disorders, which involve degeneration, death or trauma to neural cells or nerve tissue. More specifically, a composition may be used in the treatment of diseases of the peripheral nervous system, such as peripheral nerve injuries, peripheral neuropathy and localized neuropathies, and central nervous system diseases, such as Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic lateral sclerosis, and Shy-Drager syndrome. Further conditions that may be treated in accordance with the present invention include mechanical and traumatic disorders, such as spinal cord disorders, head trauma and cerebrovascular diseases such as stroke. Peripheral neuropathies resulting from chemotherapy or other medical therapies may also be treatable using a composition of the invention.

Compositions of the invention may also be useful to promote better or faster closure of non-healing wounds, including without limitation pressure ulcers, ulcers associated with vascular insufficiency, surgical and traumatic wounds, and the like.

Compositions of the present invention may also be involved in the generation or regeneration of other tissues, such as organs (including, for example, pancreas, liver, intestine,

kidney, skin, endothelium), muscle (smooth, skeletal or cardiac) and vascular (including vascular endothelium) tissue, or for promoting the growth of cells comprising such tissues. Part of the desired effects may be by inhibition or modulation of fibrotic scarring may allow normal tissue to regenerate. A polypeptide of the present invention may also exhibit angiogenic activity.

5 A composition of the present invention may also be useful for gut protection or regeneration and treatment of lung or liver fibrosis, reperfusion injury in various tissues, and conditions resulting from systemic cytokine damage.

A composition of the present invention may also be useful for promoting or inhibiting differentiation of tissues described above from precursor tissues or cells; or for inhibiting the
10 growth of tissues described above.

Therapeutic compositions of the invention can be used in the following:

Assays for tissue generation activity include, without limitation, those described in: International Patent Publication No. WO95/16035 (bone, cartilage, tendon); International Patent Publication No. WO95/05846 (nerve, neuronal); International Patent Publication No.
15 WO91/07491 (skin, endothelium).

Assays for wound healing activity include, without limitation, those described in: Winter, Epidermal Wound Healing, pps. 71-112 (Maibach, H. I. and Rovee, D. T., eds.), Year Book Medical Publishers, Inc., Chicago, as modified by Eaglstein and Mertz, J. Invest. Dermatol 71:382-84 (1978).

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4.10.7 IMMUNE STIMULATING OR SUPPRESSING ACTIVITY

A polypeptide of the present invention may also exhibit immune stimulating or immune suppressing activity, including without limitation the activities for which assays are described herein. A polynucleotide of the invention can encode a polypeptide exhibiting such activities. A
25 protein may be useful in the treatment of various immune deficiencies and disorders (including severe combined immunodeficiency (SCID)), *e.g.*, in regulating (up or down) growth and proliferation of T and/or B lymphocytes, as well as effecting the cytolytic activity of NK cells and other cell populations. These immune deficiencies may be genetic or be caused by viral (*e.g.*, HIV) as well as bacterial or fungal infections, or may result from autoimmune disorders. More
30 specifically, infectious diseases caused by viral, bacterial, fungal or other infection may be treatable using a protein of the present invention, including infections by HIV, hepatitis viruses, herpes viruses, mycobacteria, Leishmania spp., malaria spp. and various fungal infections such as candidiasis. Of course, in this regard, proteins of the present invention may also be useful where a boost to the immune system generally may be desirable, *i.e.*, in the treatment of cancer.

include, for example, connective tissue disease, multiple sclerosis, systemic lupus erythematosus, rheumatoid arthritis, autoimmune pulmonary inflammation, Guillain-Barre syndrome, autoimmune thyroiditis, insulin dependent diabetes mellitus, myasthenia gravis, graft-versus-host disease and autoimmune inflammatory eye disease. Such a protein (or antagonists thereof, including antibodies) of the present invention may also to be useful in the treatment of allergic reactions and conditions (*e.g.*, anaphylaxis, serum sickness, drug reactions, food allergies, insect venom allergies, mastocytosis, allergic rhinitis, hypersensitivity pneumonitis, urticaria, angioedema, eczema, atopic dermatitis, allergic contact dermatitis, erythema multiforme, Stevens-Johnson syndrome, allergic conjunctivitis, atopic keratoconjunctivitis, venereal keratoconjunctivitis, giant papillary conjunctivitis and contact allergies), such as asthma (particularly allergic asthma) or other respiratory problems. Other conditions, in which immune suppression is desired (including, for example, organ transplantation), may also be treatable using a protein (or antagonists thereof) of the present invention. The therapeutic effects of the polypeptides or antagonists thereof on allergic reactions can be evaluated by *in vivo* animals models such as the cumulative contact enhancement test (Lastbom et al., Toxicology 125: 59-66, 1998), skin prick test (Hoffmann et al., Allergy 54: 446-54, 1999), guinea pig skin sensitization test (Vohr et al., Arch. Toxicol. 73: 501-9), and murine local lymph node assay (Kimber et al., J. Toxicol. Environ. Health 53: 563-79).

Using the proteins of the invention it may also be possible to modulate immune responses, in a number of ways. Down regulation may be in the form of inhibiting or blocking an immune response already in progress or may involve preventing the induction of an immune response. The functions of activated T cells may be inhibited by suppressing T cell responses or by inducing specific tolerance in T cells, or both. Immunosuppression of T cell responses is generally an active, non-antigen-specific, process which requires continuous exposure of the T cells to the suppressive agent. Tolerance, which involves inducing non-responsiveness or anergy in T cells, is distinguishable from immunosuppression in that it is generally antigen-specific and persists after exposure to the tolerizing agent has ceased. Operationally, tolerance can be demonstrated by the lack of a T cell response upon reexposure to specific antigen in the absence of the tolerizing agent.

Down regulating or preventing one or more antigen functions (including without limitation B lymphocyte antigen functions (such as, for example, B7)), *e.g.*, preventing high level lymphokine synthesis by activated T cells, will be useful in situations of tissue, skin and organ transplantation and in graft-versus-host disease (GVHD). For example, blockage of T cell function should result in reduced tissue destruction in tissue transplantation. Typically, in tissue

transplants, rejection of the transplant is initiated through its recognition as foreign by T cells, followed by an immune reaction that destroys the transplant. The administration of a therapeutic composition of the invention may prevent cytokine synthesis by immune cells, such as T cells, and thus acts as an immunosuppressant. Moreover, a lack of costimulation may also be
5 sufficient to anergize the T cells, thereby inducing tolerance in a subject. Induction of long-term tolerance by B lymphocyte antigen-blocking reagents may avoid the necessity of repeated administration of these blocking reagents. To achieve sufficient immunosuppression or tolerance in a subject, it may also be necessary to block the function of a combination of B lymphocyte antigens.

10 The efficacy of particular therapeutic compositions in preventing organ transplant rejection or GVHD can be assessed using animal models that are predictive of efficacy in humans. Examples of appropriate systems which can be used include allogeneic cardiac grafts in rats and xenogeneic pancreatic islet cell grafts in mice, both of which have been used to examine the immunosuppressive effects of CTLA4Ig fusion proteins in vivo as described in Lenschow et
15 al., Science 257:789-792 (1992) and Turka et al., Proc. Natl. Acad. Sci USA, 89:11102-11105 (1992). In addition, murine models of GVHD (see Paul ed., Fundamental Immunology, Raven Press, New York, 1989, pp. 846-847) can be used to determine the effect of therapeutic compositions of the invention on the development of that disease.

Blocking antigen function may also be therapeutically useful for treating autoimmune
20 diseases. Many autoimmune disorders are the result of inappropriate activation of T cells that are reactive against self-tissue and which promote the production of cytokines and autoantibodies involved in the pathology of the diseases. Preventing the activation of autoreactive T cells may reduce or eliminate disease symptoms. Administration of reagents which block stimulation of T cells can be used to inhibit T cell activation and prevent production
25 of autoantibodies or T cell-derived cytokines which may be involved in the disease process. Additionally, blocking reagents may induce antigen-specific tolerance of autoreactive T cells which could lead to long-term relief from the disease. The efficacy of blocking reagents in preventing or alleviating autoimmune disorders can be determined using a number of well-characterized animal models of human autoimmune diseases. Examples include murine
30 experimental autoimmune encephalitis, systemic lupus erythmatosis in MRL/lpr/lpr mice or NZB hybrid mice, murine autoimmune collagen arthritis, diabetes mellitus in NOD mice and BB rats, and murine experimental myasthenia gravis (see Paul ed., Fundamental Immunology, Raven Press, New York, 1989, pp. 840-856).

Upregulation of an antigen function (e.g., a B lymphocyte antigen function), as a means
35 of up regulating immune responses, may also be useful in therapy. Upregulation of immune

responses may be in the form of enhancing an existing immune response or eliciting an initial immune response. For example, enhancing an immune response may be useful in cases of viral infection, including systemic viral diseases such as influenza, the common cold, and encephalitis.

5 Alternatively, anti-viral immune responses may be enhanced in an infected patient by removing T cells from the patient, costimulating the T cells in vitro with viral antigen-pulsed APCs either expressing a peptide of the present invention or together with a stimulatory form of a soluble peptide of the present invention and reintroducing the in vitro activated T cells into the patient. Another method of enhancing anti-viral immune responses would be to isolate infected
10 cells from a patient, transfect them with a nucleic acid encoding a protein of the present invention as described herein such that the cells express all or a portion of the protein on their surface, and reintroduce the transfected cells into the patient. The infected cells would now be capable of delivering a costimulatory signal to, and thereby activate, T cells in vivo.

A polypeptide of the present invention may provide the necessary stimulation signal to T
15 cells to induce a T cell mediated immune response against the transfected tumor cells. In addition, tumor cells which lack MHC class I or MHC class II molecules, or which fail to reexpress sufficient mounts of MHC class I or MHC class II molecules, can be transfected with nucleic acid encoding all or a portion of (*e.g.*, a cytoplasmic-domain truncated portion) of an MHC class I alpha chain protein and β_2 microglobulin protein or an MHC class II alpha chain
20 protein and an MHC class II beta chain protein to thereby express MHC class I or MHC class II proteins on the cell surface. Expression of the appropriate class I or class II MHC in conjunction with a peptide having the activity of a B lymphocyte antigen (*e.g.*, B7-1, B7-2, B7-3) induces a T cell mediated immune response against the transfected tumor cell. Optionally, a gene encoding an antisense construct which blocks expression of an MHC class II associated protein, such as
25 the invariant chain, can also be cotransfected with a DNA encoding a peptide having the activity of a B lymphocyte antigen to promote presentation of tumor associated antigens and induce tumor specific immunity. Thus, the induction of a T cell mediated immune response in a human subject may be sufficient to overcome tumor-specific tolerance in the subject.

The activity of a protein of the invention may, among other means, be measured by the
30 following methods:

Suitable assays for thymocyte or splenocyte cytotoxicity include, without limitation, those described in: Current Protocols in Immunology, Ed by J. E. Coligan, A. M. Kruisbeek, D. H. Margulies, E. M. Shevach, W. Strober, Pub. Greene Publishing Associates and Wiley-Interscience (Chapter 3, In Vitro assays for Mouse Lymphocyte Function 3.1-3.19;
35 Chapter 7, Immunologic studies in Humans); Herrmann et al., Proc. Natl. Acad. Sci. USA

78:2488-2492, 1981; Herrmann et al., J. Immunol. 128:1968-1974, 1982; Handa et al., J. Immunol. 135:1564-1572, 1985; Takai et al., I. Immunol. 137:3494-3500, 1986; Takai et al., J. Immunol. 140:508-512, 1988; Bowman et al., J. Virology 61:1992-1998; Bertagnolli et al., Cellular Immunology 133:327-341, 1991; Brown et al., J. Immunol. 153:3079-3092, 1994.

5 Assays for T-cell-dependent immunoglobulin responses and isotype switching (which will identify, among others, proteins that modulate T-cell dependent antibody responses and that affect Th1/Th2 profiles) include, without limitation, those described in: Maliszewski, J. Immunol. 144:3028-3033, 1990; and Assays for B cell function: In vitro antibody production, Mond, J. J. and Brunswick, M. In Current Protocols in Immunology. J. E. e.a. Coligan eds. Vol 1
10 pp. 3.8.1-3.8.16, John Wiley and Sons, Toronto. 1994.

 Mixed lymphocyte reaction (MLR) assays (which will identify, among others, proteins that generate predominantly Th1 and CTL responses) include, without limitation, those described in: Current Protocols in Immunology, Ed by J. E. Coligan, A. M. Kruisbeek, D. H. Margulies, E. M. Shevach, W. Strober, Pub. Greene Publishing Associates and Wiley-Interscience (Chapter 3,
15 In Vitro assays for Mouse Lymphocyte Function 3.1-3.19; Chapter 7, Immunologic studies in Humans); Takai et al., J. Immunol. 137:3494-3500, 1986; Takai et al., J. Immunol. 140:508-512, 1988; Bertagnolli et al., J. Immunol. 149:3778-3783, 1992.

 Dendritic cell-dependent assays (which will identify, among others, proteins expressed by dendritic cells that activate naive T-cells) include, without limitation, those described in:
20 Guery et al., J. Immunol. 134:536-544, 1995; Inaba et al., Journal of Experimental Medicine 173:549-559, 1991; Macatonia et al., Journal of Immunology 154:5071-5079, 1995; Porgador et al., Journal of Experimental Medicine 182:255-260, 1995; Nair et al., Journal of Virology 67:4062-4069, 1993; Huang et al., Science 264:961-965, 1994; Macatonia et al., Journal of Experimental Medicine 169:1255-1264, 1989; Bhardwaj et al., Journal of Clinical Investigation
25 94:797-807, 1994; and Inaba et al., Journal of Experimental Medicine 172:631-640, 1990.

 Assays for lymphocyte survival/apoptosis (which will identify, among others, proteins that prevent apoptosis after superantigen induction and proteins that regulate lymphocyte homeostasis) include, without limitation, those described in: Darzynkiewicz et al., Cytometry 13:795-808, 1992; Gorczyca et al., Leukemia 7:659-670, 1993; Gorczyca et al., Cancer Research
30 53:1945-1951, 1993; Itoh et al., Cell 66:233-243, 1991; Zacharchuk, Journal of Immunology 145:4037-4045, 1990; Zamai et al., Cytometry 14:891-897, 1993; Gorczyca et al., International Journal of Oncology 1:639-648, 1992.

 Assays for proteins that influence early steps of T-cell commitment and development include, without limitation, those described in: Antica et al., Blood 84:111-117, 1994; Fine et

al., Cellular Immunology 155:111-122, 1994; Galy et al., Blood 85:2770-2778, 1995; Toki et al., Proc. Nat. Acad. Sci. USA 88:7548-7551, 1991.

4.10.8 ACTIVIN/INHIBIN ACTIVITY

5 A polypeptide of the present invention may also exhibit activin- or inhibin-related activities. A polynucleotide of the invention may encode a polypeptide exhibiting such characteristics. Inhibins are characterized by their ability to inhibit the release of follicle stimulating hormone (FSH), while activins are characterized by their ability to stimulate the release of follicle stimulating hormone (FSH). Thus, a polypeptide of the present invention,
10 alone or in heterodimers with a member of the inhibin family, may be useful as a contraceptive based on the ability of inhibins to decrease fertility in female mammals and decrease spermatogenesis in male mammals. Administration of sufficient amounts of other inhibins can induce infertility in these mammals. Alternatively, the polypeptide of the invention, as a homodimer or as a heterodimer with other protein subunits of the inhibin group, may be useful as
15 a fertility inducing therapeutic, based upon the ability of activin molecules in stimulating FSH release from cells of the anterior pituitary. See, for example, U.S. Pat. No. 4,798,885. A polypeptide of the invention may also be useful for advancement of the onset of fertility in sexually immature mammals, so as to increase the lifetime reproductive performance of domestic animals such as, but not limited to, cows, sheep and pigs.

20 The activity of a polypeptide of the invention may, among other means, be measured by the following methods.

Assays for activin/inhibin activity include, without limitation, those described in: Vale et al., Endocrinology 91:562-572, 1972; Ling et al., Nature 321:779-782, 1986; Vale et al., Nature 321:776-779, 1986; Mason et al., Nature 318:659-663, 1985; Forage et al., Proc. Natl. Acad. Sci.
25 USA 83:3091-3095, 1986.

4.10.9 CHEMOTACTIC/CHEMOKINETIC ACTIVITY

A polypeptide of the present invention may be involved in chemotactic or chemokinetic activity for mammalian cells, including, for example, monocytes, fibroblasts, neutrophils,
30 T-cells, mast cells, eosinophils, epithelial and/or endothelial cells. A polynucleotide of the invention can encode a polypeptide exhibiting such attributes. Chemotactic and chemokinetic receptor activation can be used to mobilize or attract a desired cell population to a desired site of action. Chemotactic or chemokinetic compositions (e.g. proteins, antibodies, binding partners, or modulators of the invention) provide particular advantages in treatment of wounds and other
35 trauma to tissues, as well as in treatment of localized infections. For example, attraction of

lymphocytes, monocytes or neutrophils to tumors or sites of infection may result in improved immune responses against the tumor or infecting agent.

A protein or peptide has chemotactic activity for a particular cell population if it can stimulate, directly or indirectly, the directed orientation or movement of such cell population.

5 Preferably, the protein or peptide has the ability to directly stimulate directed movement of cells. Whether a particular protein has chemotactic activity for a population of cells can be readily determined by employing such protein or peptide in any known assay for cell chemotaxis.

Therapeutic compositions of the invention can be used in the following:

Assays for chemotactic activity (which will identify proteins that induce or prevent
10 chemotaxis) consist of assays that measure the ability of a protein to induce the migration of cells across a membrane as well as the ability of a protein to induce the adhesion of one cell population to another cell population. Suitable assays for movement and adhesion include, without limitation, those described in: Current Protocols in Immunology, Ed by J. E. Coligan, A. M. Kruisbeek, D. H. Marguiles, E. M. Shevach, W. Strober, Pub. Greene Publishing Associates
15 and Wiley-Interscience (Chapter 6.12, Measurement of alpha and beta Chemokines 6.12.1-6.12.28; Taub et al. J. Clin. Invest. 95:1370-1376, 1995; Lind et al. APMIS 103:140-146, 1995; Muller et al Eur. J. Immunol. 25:1744-1748; Gruber et al. J. of Immunol. 152:5860-5867, 1994; Johnston et al. J. of Immunol. 153:1762-1768, 1994.

20 4.10.10 HEMOSTATIC AND THROMBOLYTIC ACTIVITY

A polypeptide of the invention may also be involved in hemostasis or thrombolysis or thrombosis. A polynucleotide of the invention can encode a polypeptide exhibiting such attributes. Compositions may be useful in treatment of various coagulation disorders (including hereditary disorders, such as hemophilias) or to enhance coagulation and other hemostatic events
25 in treating wounds resulting from trauma, surgery or other causes. A composition of the invention may also be useful for dissolving or inhibiting formation of thromboses and for treatment and prevention of conditions resulting therefrom (such as, for example, infarction of cardiac and central nervous system vessels (*e.g.*, stroke).

Therapeutic compositions of the invention can be used in the following:

30 Assay for hemostatic and thrombolytic activity include, without limitation, those described in: Linet et al., J. Clin. Pharmacol. 26:131-140, 1986; Burdick et al., Thrombosis Res. 45:413-419, 1987; Humphrey et al., Fibrinolysis 5:71-79 (1991); Schaub, Prostaglandins 35:467-474, 1988.

35 4.10.11 CANCER DIAGNOSIS AND THERAPY

Polypeptides of the invention may be involved in cancer cell generation, proliferation or metastasis. Detection of the presence or amount of polynucleotides or polypeptides of the invention may be useful for the diagnosis and/or prognosis of one or more types of cancer. For example, the presence or increased expression of a polynucleotide/polypeptide of the invention may indicate a hereditary risk of cancer, a precancerous condition, or an ongoing malignancy. Conversely, a defect in the gene or absence of the polypeptide may be associated with a cancer condition. Identification of single nucleotide polymorphisms associated with cancer or a predisposition to cancer may also be useful for diagnosis or prognosis.

Cancer treatments promote tumor regression by inhibiting tumor cell proliferation, inhibiting angiogenesis (growth of new blood vessels that is necessary to support tumor growth) and/or prohibiting metastasis by reducing tumor cell motility or invasiveness. Therapeutic compositions of the invention may be effective in adult and pediatric oncology including in solid phase tumors/malignancies, locally advanced tumors, human soft tissue sarcomas, metastatic cancer, including lymphatic metastases, blood cell malignancies including multiple myeloma, acute and chronic leukemias, and lymphomas, head and neck cancers including mouth cancer, larynx cancer and thyroid cancer, lung cancers including small cell carcinoma and non-small cell cancers, breast cancers including small cell carcinoma and ductal carcinoma, gastrointestinal cancers including esophageal cancer, stomach cancer, colon cancer, colorectal cancer and polyps associated with colorectal neoplasia, pancreatic cancers, liver cancer, urologic cancers including bladder cancer and prostate cancer, malignancies of the female genital tract including ovarian carcinoma, uterine (including endometrial) cancers, and solid tumor in the ovarian follicle, kidney cancers including renal cell carcinoma, brain cancers including intrinsic brain tumors, neuroblastoma, astrocytic brain tumors, gliomas, metastatic tumor cell invasion in the central nervous system, bone cancers including osteomas, skin cancers including malignant melanoma, tumor progression of human skin keratinocytes, squamous cell carcinoma, basal cell carcinoma, hemangiopericytoma and Kaposi's sarcoma.

Polypeptides, polynucleotides, or modulators of polypeptides of the invention (including inhibitors and stimulators of the biological activity of the polypeptide of the invention) may be administered to treat cancer. Therapeutic compositions can be administered in therapeutically effective dosages alone or in combination with adjuvant cancer therapy such as surgery, chemotherapy, radiotherapy, thermotherapy, and laser therapy, and may provide a beneficial effect, *e.g.* reducing tumor size, slowing rate of tumor growth, inhibiting metastasis, or otherwise improving overall clinical condition, without necessarily eradicating the cancer.

The composition can also be administered in therapeutically effective amounts as a portion of an anti-cancer cocktail. An anti-cancer cocktail is a mixture of the polypeptide or

modulator of the invention with one or more anti-cancer drugs in addition to a pharmaceutically acceptable carrier for delivery. The use of anti-cancer cocktails as a cancer treatment is routine. Anti-cancer drugs that are well known in the art and can be used as a treatment in combination with the polypeptide or modulator of the invention include: Actinomycin D,

5 Aminogluthethimide, Asparaginase, Bleomycin, Busulfan, Carboplatin, Carmustine, Chlorambucil, Cisplatin (cis-DDP), Cyclophosphamide, Cytarabine HCl (Cytosine arabinoside), Dacarbazine, Dactinomycin, Daunorubicin HCl, Doxorubicin HCl, Estramustine phosphate sodium, Etoposide (V16-213), Floxuridine, 5-Fluorouracil (5-Fu), Flutamide, Hydroxyurea (hydroxycarbamide), Ifosfamide, Interferon Alpha-2a, Interferon Alpha-2b, Leuprolide acetate
10 (LHRH-releasing factor analog), Lomustine, Mechlorethamine HCl (nitrogen mustard), Melphalan, Mercaptopurine, Mesna, Methotrexate (MTX), Mitomycin, Mitoxantrone HCl, Octreotide, Plicamycin, Procarbazine HCl, Streptozocin, Tamoxifen citrate, Thioguanine, Thiotepa, Vinblastine sulfate, Vincristine sulfate, Amsacrine, Azacitidine, Hexamethylmelamine, Interleukin-2, Mitoguazone, Pentostatin, Semustine, Teniposide, and Vindesine sulfate.

15 In addition, therapeutic compositions of the invention may be used for prophylactic treatment of cancer. There are hereditary conditions and/or environmental situations (*e.g.* exposure to carcinogens) known in the art that predispose an individual to developing cancers. Under these circumstances, it may be beneficial to treat these individuals with therapeutically effective doses of the polypeptide of the invention to reduce the risk of developing cancers.

20 *In vitro* models can be used to determine the effective doses of the polypeptide of the invention as a potential cancer treatment. These *in vitro* models include proliferation assays of cultured tumor cells, growth of cultured tumor cells in soft agar (see Freshney, (1987) Culture of Animal Cells: A Manual of Basic Technique, Wiley-Liss, New York, NY Ch 18 and Ch 21), tumor systems in nude mice as described in Giovanella et al., J. Natl. Can. Inst., 52: 921-30
25 (1974), mobility and invasive potential of tumor cells in Boyden Chamber assays as described in Pilkington et al., Anticancer Res., 17: 4107-9 (1997), and angiogenesis assays such as induction of vascularization of the chick chorioallantoic membrane or induction of vascular endothelial cell migration as described in Ribatta et al., Intl. J. Dev. Biol., 40: 1189-97 (1999) and Li et al., Clin. Exp. Metastasis, 17:423-9 (1999), respectively. Suitable tumor cells lines are available,
30 *e.g.* from American Type Tissue Culture Collection catalogs.

4.10.12 RECEPTOR/LIGAND ACTIVITY

A polypeptide of the present invention may also demonstrate activity as receptor, receptor ligand or inhibitor or agonist of receptor/ligand interactions. A polynucleotide of the
35 invention can encode a polypeptide exhibiting such characteristics. Examples of such receptors

and ligands include, without limitation, cytokine receptors and their ligands, receptor kinases and their ligands, receptor phosphatases and their ligands, receptors involved in cell-cell interactions and their ligands (including without limitation, cellular adhesion molecules (such as selectins, integrins and their ligands) and receptor/ligand pairs involved in antigen presentation, antigen
5 recognition and development of cellular and humoral immune responses. Receptors and ligands are also useful for screening of potential peptide or small molecule inhibitors of the relevant receptor/ligand interaction. A protein of the present invention (including, without limitation, fragments of receptors and ligands) may themselves be useful as inhibitors of receptor/ligand interactions.

10 The activity of a polypeptide of the invention may, among other means, be measured by the following methods:

Suitable assays for receptor-ligand activity include without limitation those described in: Current Protocols in Immunology, Ed by J. E. Coligan, A. M. Kruisbeek, D. H. Margulies, E. M. Shevach, W. Strober, Pub. Greene Publishing Associates and Wiley- Interscience (Chapter 7.28,
15 Measurement of Cellular Adhesion under static conditions 7.28.1- 7.28.22), Takai et al., Proc. Natl. Acad. Sci. USA 84:6864-6868, 1987; Bierer et al., J. Exp. Med. 168:1145-1156, 1988; Rosenstein et al., J. Exp. Med. 169:149-160 1989; Stoltenborg et al., J. Immunol. Methods 175:59-68, 1994; Stitt et al., Cell 80:661-670, 1995.

By way of example, the polypeptides of the invention may be used as a receptor for a
20 ligand(s) thereby transmitting the biological activity of that ligand(s). Ligands may be identified through binding assays, affinity chromatography, dihybrid screening assays, BIAcore assays, gel overlay assays, or other methods known in the art.

Studies characterizing drugs or proteins as agonist or antagonist or partial agonists or a partial antagonist require the use of other proteins as competing ligands. The polypeptides of the
25 present invention or ligand(s) thereof may be labeled by being coupled to radioisotopes, colorimetric molecules or toxin molecules by conventional methods. ("Guide to Protein Purification" Murray P. Deutscher (ed) Methods in Enzymology Vol. 182 (1990) Academic Press, Inc. San Diego). Examples of radioisotopes include, but are not limited to, tritium and carbon-14. Examples of colorimetric molecules include, but are not limited to, fluorescent
30 molecules such as fluorescamine, or rhodamine or other colorimetric molecules. Examples of toxins include, but are not limited, to ricin.

4.10.13 DRUG SCREENING

This invention is particularly useful for screening chemical compounds by using the
35 novel polypeptides or binding fragments thereof in any of a variety of drug screening techniques.

The polypeptides or fragments employed in such a test may either be free in solution, affixed to a solid support, borne on a cell surface or located intracellularly. One method of drug screening utilizes eukaryotic or prokaryotic host cells which are stably transformed with recombinant nucleic acids expressing the polypeptide or a fragment thereof. Drugs are screened against such transformed cells in competitive binding assays. Such cells, either in viable or fixed form, can be used for standard binding assays. One may measure, for example, the formation of complexes between polypeptides of the invention or fragments and the agent being tested or examine the diminution in complex formation between the novel polypeptides and an appropriate cell line, which are well known in the art.

Sources for test compounds that may be screened for ability to bind to or modulate (*i.e.*, increase or decrease) the activity of polypeptides of the invention include (1) inorganic and organic chemical libraries, (2) natural product libraries, and (3) combinatorial libraries comprised of either random or mimetic peptides, oligonucleotides or organic molecules.

Chemical libraries may be readily synthesized or purchased from a number of commercial sources, and may include structural analogs of known compounds or compounds that are identified as "hits" or "leads" via natural product screening.

The sources of natural product libraries are microorganisms (including bacteria and fungi), animals, plants or other vegetation, or marine organisms, and libraries of mixtures for screening may be created by: (1) fermentation and extraction of broths from soil, plant or marine microorganisms or (2) extraction of the organisms themselves. Natural product libraries include polyketides, non-ribosomal peptides, and (non-naturally occurring) variants thereof. For a review, see *Science* 282:63-68 (1998).

Combinatorial libraries are composed of large numbers of peptides, oligonucleotides or organic compounds and can be readily prepared by traditional automated synthesis methods, PCR, cloning or proprietary synthetic methods. Of particular interest are peptide and oligonucleotide combinatorial libraries. Still other libraries of interest include peptide, protein, peptidomimetic, multiparallel synthetic collection, recombinatorial, and polypeptide libraries. For a review of combinatorial chemistry and libraries created therefrom, see Myers, *Curr. Opin. Biotechnol.* 8:701-707 (1997). For reviews and examples of peptidomimetic libraries, see Al-Obeidi et al., *Mol. Biotechnol.*, 9(3):205-23 (1998); Hruby et al., *Curr Opin Chem Biol*, 1(1):114-19 (1997); Dorner et al., *Bioorg Med Chem*, 4(5):709-15 (1996) (alkylated dipeptides).

Identification of modulators through use of the various libraries described herein permits modification of the candidate "hit" (or "lead") to optimize the capacity of the "hit" to bind a polypeptide of the invention. The molecules identified in the binding assay are then tested for antagonist or agonist activity in *in vivo* tissue culture or animal models that are well known in the

art. In brief, the molecules are titrated into a plurality of cell cultures or animals and then tested for either cell/animal death or prolonged survival of the animal/cells.

The binding molecules thus identified may be complexed with toxins, *e.g.*, ricin or cholera, or with other compounds that are toxic to cells such as radioisotopes. The toxin-binding molecule complex is then targeted to a tumor or other cell by the specificity of the binding molecule for a polypeptide of the invention. Alternatively, the binding molecules may be complexed with imaging agents for targeting and imaging purposes.

4.10.14 ASSAY FOR RECEPTOR ACTIVITY

The invention also provides methods to detect specific binding of a polypeptide *e.g.* a ligand or a receptor. The art provides numerous assays particularly useful for identifying previously unknown binding partners for receptor polypeptides of the invention. For example, expression cloning using mammalian or bacterial cells, or dihybrid screening assays can be used to identify polynucleotides encoding binding partners. As another example, affinity chromatography with the appropriate immobilized polypeptide of the invention can be used to isolate polypeptides that recognize and bind polypeptides of the invention. There are a number of different libraries used for the identification of compounds, and in particular small molecules, that modulate (*i.e.*, increase or decrease) biological activity of a polypeptide of the invention. Ligands for receptor polypeptides of the invention can also be identified by adding exogenous ligands, or cocktails of ligands to two cells populations that are genetically identical except for the expression of the receptor of the invention: one cell population expresses the receptor of the invention whereas the other does not. The responses of the two cell populations to the addition of ligand(s) are then compared. Alternatively, an expression library can be co-expressed with the polypeptide of the invention in cells and assayed for an autocrine response to identify potential ligand(s). As still another example, BIAcore assays, gel overlay assays, or other methods known in the art can be used to identify binding partner polypeptides, including, (1) organic and inorganic chemical libraries, (2) natural product libraries, and (3) combinatorial libraries comprised of random peptides, oligonucleotides or organic molecules.

The role of downstream intracellular signaling molecules in the signaling cascade of the polypeptide of the invention can be determined. For example, a chimeric protein in which the cytoplasmic domain of the polypeptide of the invention is fused to the extracellular portion of a protein, whose ligand has been identified, is produced in a host cell. The cell is then incubated with the ligand specific for the extracellular portion of the chimeric protein, thereby activating the chimeric receptor. Known downstream proteins involved in intracellular signaling can then

be assayed for expected modifications *i.e.* phosphorylation. Other methods known to those in the art can also be used to identify signaling molecules involved in receptor activity.

4.10.15 ANTI-INFLAMMATORY ACTIVITY

5 Compositions of the present invention may also exhibit anti-inflammatory activity. The anti-inflammatory activity may be achieved by providing a stimulus to cells involved in the inflammatory response, by inhibiting or promoting cell-cell interactions (such as, for example, cell adhesion), by inhibiting or promoting chemotaxis of cells involved in the inflammatory process, inhibiting or promoting cell extravasation, or by stimulating or suppressing production
10 of other factors which more directly inhibit or promote an inflammatory response. Compositions with such activities can be used to treat inflammatory conditions including chronic or acute conditions), including without limitation intimation associated with infection (such as septic shock, sepsis or systemic inflammatory response syndrome (SIRS)), ischemia-reperfusion injury, endotoxin lethality, arthritis, complement-mediated hyperacute rejection, nephritis, cytokine or
15 chemokine-induced lung injury, inflammatory bowel disease, Crohn's disease or resulting from over production of cytokines such as TNF or IL-1. Compositions of the invention may also be useful to treat anaphylaxis and hypersensitivity to an antigenic substance or material. Compositions of this invention may be utilized to prevent or treat conditions such as, but not limited to, sepsis, acute pancreatitis, endotoxin shock, cytokine induced shock, rheumatoid
20 arthritis, chronic inflammatory arthritis, pancreatic cell damage from diabetes mellitus type 1, graft versus host disease, inflammatory bowel disease, inflammation associated with pulmonary disease, other autoimmune disease or inflammatory disease, an antiproliferative agent such as for acute or chronic myelogenous leukemia or in the prevention of premature labor secondary to intrauterine infections.

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4.10.16 LEUKEMIAS

Leukemias and related disorders may be treated or prevented by administration of a therapeutic that promotes or inhibits function of the polynucleotides and/or polypeptides of the invention. Such leukemias and related disorders include but are not limited to acute leukemia,
30 acute lymphocytic leukemia, acute myelocytic leukemia, myeloblastic, promyelocytic, myelomonocytic, monocytic, erythroleukemia, chronic leukemia, chronic myelocytic (granulocytic) leukemia and chronic lymphocytic leukemia (for a review of such disorders, see Fishman et al., 1985, Medicine, 2d Ed., J.B. Lippincott Co., Philadelphia).

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4.10.17 NERVOUS SYSTEM DISORDERS

Nervous system disorders, involving cell types which can be tested for efficacy of intervention with compounds that modulate the activity of the polynucleotides and/or polypeptides of the invention, and which can be treated upon thus observing an indication of therapeutic utility, include but are not limited to nervous system injuries, and diseases or disorders which result in either a disconnection of axons, a diminution or degeneration of neurons, or demyelination. Nervous system lesions which may be treated in a patient (including human and non-human mammalian patients) according to the invention include but are not limited to the following lesions of either the central (including spinal cord, brain) or peripheral nervous systems:

(i) traumatic lesions, including lesions caused by physical injury or associated with surgery, for example, lesions which sever a portion of the nervous system, or compression injuries;

(ii) ischemic lesions, in which a lack of oxygen in a portion of the nervous system results in neuronal injury or death, including cerebral infarction or ischemia, or spinal cord infarction or ischemia;

(iii) infectious lesions, in which a portion of the nervous system is destroyed or injured as a result of infection, for example, by an abscess or associated with infection by human immunodeficiency virus, herpes zoster, or herpes simplex virus or with Lyme disease, tuberculosis, syphilis;

(iv) degenerative lesions, in which a portion of the nervous system is destroyed or injured as a result of a degenerative process including but not limited to degeneration associated with Parkinson's disease, Alzheimer's disease, Huntington's chorea, or amyotrophic lateral sclerosis;

(v) lesions associated with nutritional diseases or disorders, in which a portion of the nervous system is destroyed or injured by a nutritional disorder or disorder of metabolism including but not limited to, vitamin B12 deficiency, folic acid deficiency, Wernicke disease, tobacco-alcohol amblyopia, Marchiafava-Bignami disease (primary degeneration of the corpus callosum), and alcoholic cerebellar degeneration;

(vi) neurological lesions associated with systemic diseases including but not limited to diabetes (diabetic neuropathy, Bell's palsy), systemic lupus erythematosus, carcinoma, or sarcoidosis;

(vii) lesions caused by toxic substances including alcohol, lead, or particular neurotoxins; and

(viii) demyelinated lesions in which a portion of the nervous system is destroyed or injured by a demyelinating disease including but not limited to multiple sclerosis, human

immunodeficiency virus-associated myelopathy, transverse myelopathy or various etiologies, progressive multifocal leukoencephalopathy, and central pontine myelinolysis.

Therapeutics which are useful according to the invention for treatment of a nervous system disorder may be selected by testing for biological activity in promoting the survival or differentiation of neurons. For example, and not by way of limitation, therapeutics which elicit
5 any of the following effects may be useful according to the invention:

- (i) increased survival time of neurons in culture;
- (ii) increased sprouting of neurons in culture or *in vivo*;
- (iii) increased production of a neuron-associated molecule in culture or *in vivo*, *e.g.*,
10 choline acetyltransferase or acetylcholinesterase with respect to motor neurons; or
- (iv) decreased symptoms of neuron dysfunction *in vivo*.

Such effects may be measured by any method known in the art. In preferred, non-limiting embodiments, increased survival of neurons may be measured by the method set forth in Arakawa et al. (1990, J. Neurosci. 10:3507-3515); increased sprouting of neurons may
15 be detected by methods set forth in Pestronk et al. (1980, Exp. Neurol. 70:65-82) or Brown et al. (1981, Ann. Rev. Neurosci. 4:17-42); increased production of neuron-associated molecules may be measured by bioassay, enzymatic assay, antibody binding, Northern blot assay, *etc.*, depending on the molecule to be measured; and motor neuron dysfunction may be measured by assessing the physical manifestation of motor neuron disorder, *e.g.*, weakness, motor neuron
20 conduction velocity, or functional disability.

In specific embodiments, motor neuron disorders that may be treated according to the invention include but are not limited to disorders such as infarction, infection, exposure to toxin, trauma, surgical damage, degenerative disease or malignancy that may affect motor neurons as well as other components of the nervous system, as well as disorders that selectively affect
25 neurons such as amyotrophic lateral sclerosis, and including but not limited to progressive spinal muscular atrophy, progressive bulbar palsy, primary lateral sclerosis, infantile and juvenile muscular atrophy, progressive bulbar paralysis of childhood (Fazio-Londe syndrome), poliomyelitis and the post polio syndrome, and Hereditary Motorsensory Neuropathy (Charcot-Marie-Tooth Disease).

4.10.18 OTHER ACTIVITIES

A polypeptide of the invention may also exhibit one or more of the following additional activities or effects: inhibiting the growth, infection or function of, or killing, infectious agents, including, without limitation, bacteria, viruses, fungi and other parasites; effecting (suppressing
35 or enhancing) bodily characteristics, including, without limitation, height, weight, hair color, eye

color, skin, fat to lean ratio or other tissue pigmentation, or organ or body part size or shape (such as, for example, breast augmentation or diminution, change in bone form or shape); effecting biorhythms or circadian cycles or rhythms; effecting the fertility of male or female subjects; effecting the metabolism, catabolism, anabolism, processing, utilization, storage or
5 elimination of dietary fat, lipid, protein, carbohydrate, vitamins, minerals, co-factors or other nutritional factors or component(s); effecting behavioral characteristics, including, without limitation, appetite, libido, stress, cognition (including cognitive disorders), depression (including depressive disorders) and violent behaviors; providing analgesic effects or other pain reducing effects; promoting differentiation and growth of embryonic stem cells in lineages other
10 than hematopoietic lineages; hormonal or endocrine activity; in the case of enzymes, correcting deficiencies of the enzyme and treating deficiency-related diseases; treatment of hyperproliferative disorders (such as, for example, psoriasis); immunoglobulin-like activity (such as, for example, the ability to bind antigens or complement); and the ability to act as an antigen in a vaccine composition to raise an immune response against such protein or another material or
15 entity which is cross-reactive with such protein.

4.10.19 IDENTIFICATION OF POLYMORPHISMS

The demonstration of polymorphisms makes possible the identification of such polymorphisms in human subjects and the pharmacogenetic use of this information for diagnosis
20 and treatment. Such polymorphisms may be associated with, *e.g.*, differential predisposition or susceptibility to various disease states (such as disorders involving inflammation or immune response) or a differential response to drug administration, and this genetic information can be used to tailor preventive or therapeutic treatment appropriately. For example, the existence of a polymorphism associated with a predisposition to inflammation or autoimmune disease makes
25 possible the diagnosis of this condition in humans by identifying the presence of the polymorphism.

Polymorphisms can be identified in a variety of ways known in the art which all generally involve obtaining a sample from a patient, analyzing DNA from the sample, optionally involving isolation or amplification of the DNA, and identifying the presence of the
30 polymorphism in the DNA. For example, PCR may be used to amplify an appropriate fragment of genomic DNA which may then be sequenced. Alternatively, the DNA may be subjected to allele-specific oligonucleotide hybridization (in which appropriate oligonucleotides are hybridized to the DNA under conditions permitting detection of a single base mismatch) or to a single nucleotide extension assay (in which an oligonucleotide that hybridizes immediately
35 adjacent to the position of the polymorphism is extended with one or more labeled nucleotides).

In addition, traditional restriction fragment length polymorphism analysis (using restriction enzymes that provide differential digestion of the genomic DNA depending on the presence or absence of the polymorphism) may be performed. Arrays with nucleotide sequences of the present invention can be used to detect polymorphisms. The array can comprise modified
5 nucleotide sequences of the present invention in order to detect the nucleotide sequences of the present invention. In the alternative, any one of the nucleotide sequences of the present invention can be placed on the array to detect changes from those sequences.

Alternatively a polymorphism resulting in a change in the amino acid sequence could also be detected by detecting a corresponding change in amino acid sequence of the protein, *e.g.*,
10 by an antibody specific to the variant sequence.

4.10.20 ARTHRITIS AND INFLAMMATION

The immunosuppressive effects of the compositions of the invention against rheumatoid arthritis are determined in an experimental animal model system. The experimental model
15 system is adjuvant induced arthritis in rats, and the protocol is described by J. Holoshitz, et al., 1983, Science, 219:56, or by B. Waksman et al., 1963, Int. Arch. Allergy Appl. Immunol., 23:129. Induction of the disease can be caused by a single injection, generally intradermally, of a suspension of killed Mycobacterium tuberculosis in complete Freund's adjuvant (CFA). The route of injection can vary, but rats may be injected at the base of the tail with an adjuvant
20 mixture. The polypeptide is administered in phosphate buffered solution (PBS) at a dose of about 1-5 mg/kg. The control consists of administering PBS only.

The procedure for testing the effects of the test compound would consist of intradermally injecting killed Mycobacterium tuberculosis in CFA followed by immediately administering the test compound and subsequent treatment every other day until day 24. At 14, 15, 18, 20, 22, and
25 24 days after injection of Mycobacterium CFA, an overall arthritis score may be obtained as described by J. Holoskitz above. An analysis of the data would reveal that the test compound would have a dramatic affect on the swelling of the joints as measured by a decrease of the arthritis score.

30 4.11 THERAPEUTIC METHODS

The compositions (including polypeptide fragments, analogs, variants and antibodies or other binding partners or modulators including antisense polynucleotides) of the invention have numerous applications in a variety of therapeutic methods. Examples of therapeutic applications include, but are not limited to, those exemplified herein.

4.11.1 EXAMPLE

One embodiment of the invention is the administration of an effective amount of the polypeptides or other composition of the invention to individuals affected by a disease or disorder that can be modulated by regulating the peptides of the invention. While the mode of administration is not particularly important, parenteral administration is preferred. An exemplary mode of administration is to deliver an intravenous bolus. The dosage of the polypeptides or other composition of the invention will normally be determined by the prescribing physician. It is to be expected that the dosage will vary according to the age, weight, condition and response of the individual patient. Typically, the amount of polypeptide administered per dose will be in the range of about 0.01 µg/kg to 100 mg/kg of body weight, with the preferred dose being about 0.1 µg/kg to 10 mg/kg of patient body weight. For parenteral administration, polypeptides of the invention will be formulated in an injectable form combined with a pharmaceutically acceptable parenteral vehicle. Such vehicles are well known in the art and examples include water, saline, Ringer's solution, dextrose solution, and solutions consisting of small amounts of the human serum albumin. The vehicle may contain minor amounts of additives that maintain the isotonicity and stability of the polypeptide or other active ingredient. The preparation of such solutions is within the skill of the art.

4.12 PHARMACEUTICAL FORMULATIONS AND ROUTES OF ADMINISTRATION

A protein or other composition of the present invention (from whatever source derived, including without limitation from recombinant and non-recombinant sources and including antibodies and other binding partners of the polypeptides of the invention) may be administered to a patient in need, by itself, or in pharmaceutical compositions where it is mixed with suitable carriers or excipient(s) at doses to treat or ameliorate a variety of disorders. Such a composition may optionally contain (in addition to protein or other active ingredient and a carrier) diluents, fillers, salts, buffers, stabilizers, solubilizers, and other materials well known in the art. The term "pharmaceutically acceptable" means a non-toxic material that does not interfere with the effectiveness of the biological activity of the active ingredient(s). The characteristics of the carrier will depend on the route of administration. The pharmaceutical composition of the invention may also contain cytokines, lymphokines, or other hematopoietic factors such as M-CSF, GM-CSF, TNF, IL-1, IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-8, IL-9, IL-10, IL-11, IL-12, IL-13, IL-14, IL-15, IFN, TNF0, TNF1, TNF2, G-CSF, Meg-CSF, thrombopoietin, stem cell factor, and erythropoietin. In further compositions, proteins of the invention may be combined with other agents beneficial to the treatment of the disease or disorder in question. These agents

include various growth factors such as epidermal growth factor (EGF), platelet-derived growth factor (PDGF), transforming growth factors (TGF- α and TGF- β), insulin-like growth factor (IGF), as well as cytokines described herein.

The pharmaceutical composition may further contain other agents which either enhance
5 the activity of the protein or other active ingredient or complement its activity or use in
treatment. Such additional factors and/or agents may be included in the pharmaceutical
composition to produce a synergistic effect with protein or other active ingredient of the
invention, or to minimize side effects. Conversely, protein or other active ingredient of the
present invention may be included in formulations of the particular clotting factor, cytokine,
10 lymphokine, other hematopoietic factor, thrombolytic or anti-thrombotic factor, or anti-
inflammatory agent to minimize side effects of the clotting factor, cytokine, lymphokine, other
hematopoietic factor, thrombolytic or anti-thrombotic factor, or anti-inflammatory agent (such as
IL-1Ra, IL-1 Hy1, IL-1 Hy2, anti-TNF, corticosteroids, immunosuppressive agents). A protein
of the present invention may be active in multimers (*e.g.*, heterodimers or homodimers) or
15 complexes with itself or other proteins. As a result, pharmaceutical compositions of the
invention may comprise a protein of the invention in such multimeric or complexed form.

As an alternative to being included in a pharmaceutical composition of the invention
including a first protein, a second protein or a therapeutic agent may be concurrently
administered with the first protein (*e.g.*, at the same time, or at differing times provided that
20 therapeutic concentrations of the combination of agents is achieved at the treatment site).
Techniques for formulation and administration of the compounds of the instant application may
be found in "Remington's Pharmaceutical Sciences," Mack Publishing Co., Easton, PA, latest
edition. A therapeutically effective dose further refers to that amount of the compound sufficient
to result in amelioration of symptoms, *e.g.*, treatment, healing, prevention or amelioration of the
25 relevant medical condition, or an increase in rate of treatment, healing, prevention or
amelioration of such conditions. When applied to an individual active ingredient, administered
alone, a therapeutically effective dose refers to that ingredient alone. When applied to a
combination, a therapeutically effective dose refers to combined amounts of the active
ingredients that result in the therapeutic effect, whether administered in combination, serially or
30 simultaneously.

In practicing the method of treatment or use of the present invention, a therapeutically
effective amount of protein or other active ingredient of the present invention is administered to
a mammal having a condition to be treated. Protein or other active ingredient of the present
invention may be administered in accordance with the method of the invention either alone or in
35 combination with other therapies such as treatments employing cytokines, lymphokines or other

hematopoietic factors. When co-administered with one or more cytokines, lymphokines or other hematopoietic factors, protein or other active ingredient of the present invention may be administered either simultaneously with the cytokine(s), lymphokine(s), other hematopoietic factor(s), thrombolytic or anti-thrombotic factors, or sequentially. If administered sequentially, the attending physician will decide on the appropriate sequence of administering protein or other active ingredient of the present invention in combination with cytokine(s), lymphokine(s), other hematopoietic factor(s), thrombolytic or anti-thrombotic factors.

4.12.1 ROUTES OF ADMINISTRATION

Suitable routes of administration may, for example, include oral, rectal, transmucosal, or intestinal administration; parenteral delivery, including intramuscular, subcutaneous, intramedullary injections, as well as intrathecal, direct intraventricular, intravenous, intraperitoneal, intranasal, or intraocular injections. Administration of protein or other active ingredient of the present invention used in the pharmaceutical composition or to practice the method of the present invention can be carried out in a variety of conventional ways, such as oral ingestion, inhalation, topical application or cutaneous, subcutaneous, intraperitoneal, parenteral or intravenous injection. Intravenous administration to the patient is preferred.

Alternately, one may administer the compound in a local rather than systemic manner, for example, via injection of the compound directly into a arthritic joints or in fibrotic tissue, often in a depot or sustained release formulation. In order to prevent the scarring process frequently occurring as complication of glaucoma surgery, the compounds may be administered topically, for example, as eye drops. Furthermore, one may administer the drug in a targeted drug delivery system, for example, in a liposome coated with a specific antibody, targeting, for example, arthritic or fibrotic tissue. The liposomes will be targeted to and taken up selectively by the afflicted tissue.

The polypeptides of the invention are administered by any route that delivers an effective dosage to the desired site of action. The determination of a suitable route of administration and an effective dosage for a particular indication is within the level of skill in the art. Preferably for wound treatment, one administers the therapeutic compound directly to the site. Suitable dosage ranges for the polypeptides of the invention can be extrapolated from these dosages or from similar studies in appropriate animal models. Dosages can then be adjusted as necessary by the clinician to provide maximal therapeutic benefit.

4.12.2 COMPOSITIONS/FORMULATIONS

Pharmaceutical compositions for use in accordance with the present invention thus may be formulated in a conventional manner using one or more physiologically acceptable carriers comprising excipients and auxiliaries which facilitate processing of the active compounds into preparations which can be used pharmaceutically. These pharmaceutical compositions may be
5 manufactured in a manner that is itself known, *e.g.*, by means of conventional mixing, dissolving, granulating, dragee-making, levigating, emulsifying, encapsulating, entrapping or lyophilizing processes. Proper formulation is dependent upon the route of administration chosen. When a therapeutically effective amount of protein or other active ingredient of the present invention is administered orally, protein or other active ingredient of the present
10 invention will be in the form of a tablet, capsule, powder, solution or elixir. When administered in tablet form, the pharmaceutical composition of the invention may additionally contain a solid carrier such as a gelatin or an adjuvant. The tablet, capsule, and powder contain from about 5 to 95% protein or other active ingredient of the present invention, and preferably from about 25 to 90% protein or other active ingredient of the present invention. When administered in liquid
15 form, a liquid carrier such as water, petroleum, oils of animal or plant origin such as peanut oil, mineral oil, soybean oil, or sesame oil, or synthetic oils may be added. The liquid form of the pharmaceutical composition may further contain physiological saline solution, dextrose or other saccharide solution, or glycols such as ethylene glycol, propylene glycol or polyethylene glycol. When administered in liquid form, the pharmaceutical composition contains from about 0.5 to
20 90% by weight of protein or other active ingredient of the present invention, and preferably from about 1 to 50% protein or other active ingredient of the present invention.

When a therapeutically effective amount of protein or other active ingredient of the present invention is administered by intravenous, cutaneous or subcutaneous injection, protein or other active ingredient of the present invention will be in the form of a pyrogen-free, parenterally
25 acceptable aqueous solution. The preparation of such parenterally acceptable protein or other active ingredient solutions, having due regard to pH, isotonicity, stability, and the like, is within the skill in the art. A preferred pharmaceutical composition for intravenous, cutaneous, or subcutaneous injection should contain, in addition to protein or other active ingredient of the present invention, an isotonic vehicle such as Sodium Chloride Injection, Ringer's Injection,
30 Dextrose Injection, Dextrose and Sodium Chloride Injection, Lactated Ringer's Injection, or other vehicle as known in the art. The pharmaceutical composition of the present invention may also contain stabilizers, preservatives, buffers, antioxidants, or other additives known to those of skill in the art. For injection, the agents of the invention may be formulated in aqueous solutions, preferably in physiologically compatible buffers such as Hanks's solution, Ringer's
35 solution, or physiological saline buffer. For transmucosal administration, penetrants appropriate

to the barrier to be permeated are used in the formulation. Such penetrants are generally known in the art.

For oral administration, the compounds can be formulated readily by combining the active compounds with pharmaceutically acceptable carriers well known in the art. Such carriers enable the compounds of the invention to be formulated as tablets, pills, dragees, capsules, liquids, gels, syrups, slurries, suspensions and the like, for oral ingestion by a patient to be treated. Pharmaceutical preparations for oral use can be obtained from a solid excipient, optionally grinding a resulting mixture, and processing the mixture of granules, after adding suitable auxiliaries, if desired, to obtain tablets or dragee cores. Suitable excipients are, in particular, fillers such as sugars, including lactose, sucrose, mannitol, or sorbitol; cellulose preparations such as, for example, maize starch, wheat starch, rice starch, potato starch, gelatin, gum tragacanth, methyl cellulose, hydroxypropylmethyl-cellulose, sodium carboxymethylcellulose, and/or polyvinylpyrrolidone (PVP). If desired, disintegrating agents may be added, such as the cross-linked polyvinyl pyrrolidone, agar, or alginic acid or a salt thereof such as sodium alginate. Dragee cores are provided with suitable coatings. For this purpose, concentrated sugar solutions may be used, which may optionally contain gum arabic, talc, polyvinyl pyrrolidone, carbopol gel, polyethylene glycol, and/or titanium dioxide, lacquer solutions, and suitable organic solvents or solvent mixtures. Dyestuffs or pigments may be added to the tablets or dragee coatings for identification or to characterize different combinations of active compound doses.

Pharmaceutical preparations which can be used orally include push-fit capsules made of gelatin, as well as soft, sealed capsules made of gelatin and a plasticizer, such as glycerol or sorbitol. The push-fit capsules can contain the active ingredients in admixture with filler such as lactose, binders such as starches, and/or lubricants such as talc or magnesium stearate and, optionally, stabilizers. In soft capsules, the active compounds may be dissolved or suspended in suitable liquids, such as fatty oils, liquid paraffin, or liquid polyethylene glycols. In addition, stabilizers may be added. All formulations for oral administration should be in dosages suitable for such administration. For buccal administration, the compositions may take the form of tablets or lozenges formulated in conventional manner.

For administration by inhalation, the compounds for use according to the present invention are conveniently delivered in the form of an aerosol spray presentation from pressurized packs or a nebuliser, with the use of a suitable propellant, *e.g.*, dichlorodifluoromethane, trichlorofluoromethane, dichlorotetrafluoroethane, carbon dioxide or other suitable gas. In the case of a pressurized aerosol the dosage unit may be determined by providing a valve to deliver a metered amount. Capsules and cartridges of, *e.g.*, gelatin for use

in an inhaler or insufflator may be formulated containing a powder mix of the compound and a suitable powder base such as lactose or starch. The compounds may be formulated for parenteral administration by injection, *e.g.*, by bolus injection or continuous infusion. Formulations for injection may be presented in unit dosage form, *e.g.*, in ampules or in multi-dose containers, with
5 an added preservative. The compositions may take such forms as suspensions, solutions or emulsions in oily or aqueous vehicles, and may contain formulatory agents such as suspending, stabilizing and/or dispersing agents.

Pharmaceutical formulations for parenteral administration include aqueous solutions of the active compounds in water-soluble form. Additionally, suspensions of the active compounds
10 may be prepared as appropriate oily injection suspensions. Suitable lipophilic solvents or vehicles include fatty oils such as sesame oil, or synthetic fatty acid esters, such as ethyl oleate or triglycerides, or liposomes. Aqueous injection suspensions may contain substances which increase the viscosity of the suspension, such as sodium carboxymethyl cellulose, sorbitol, or dextran. Optionally, the suspension may also contain suitable stabilizers or agents which
15 increase the solubility of the compounds to allow for the preparation of highly concentrated solutions. Alternatively, the active ingredient may be in powder form for constitution with a suitable vehicle, *e.g.*, sterile pyrogen-free water, before use.

The compounds may also be formulated in rectal compositions such as suppositories or retention enemas, *e.g.*, containing conventional suppository bases such as cocoa butter or other
20 glycerides. In addition to the formulations described previously, the compounds may also be formulated as a depot preparation. Such long acting formulations may be administered by implantation (for example subcutaneously or intramuscularly) or by intramuscular injection. Thus, for example, the compounds may be formulated with suitable polymeric or hydrophobic materials (for example as an emulsion in an acceptable oil) or ion exchange resins, or as
25 sparingly soluble derivatives, for example, as a sparingly soluble salt.

A pharmaceutical carrier for the hydrophobic compounds of the invention is a co-solvent system comprising benzyl alcohol, a nonpolar surfactant, a water-miscible organic polymer, and an aqueous phase. The co-solvent system may be the VPD co-solvent system. VPD is a solution of 3% w/v benzyl alcohol, 8% w/v of the nonpolar surfactant polysorbate 80, and 65% w/v
30 polyethylene glycol 300, made up to volume in absolute ethanol. The VPD co-solvent system (VPD:5W) consists of VPD diluted 1:1 with a 5% dextrose in water solution. This co-solvent system dissolves hydrophobic compounds well, and itself produces low toxicity upon systemic administration. Naturally, the proportions of a co-solvent system may be varied considerably without destroying its solubility and toxicity characteristics. Furthermore, the identity of the
35 co-solvent components may be varied: for example, other low-toxicity nonpolar surfactants may

be used instead of polysorbate 80; the fraction size of polyethylene glycol may be varied; other biocompatible polymers may replace polyethylene glycol, *e.g.* polyvinyl pyrrolidone; and other sugars or polysaccharides may substitute for dextrose. Alternatively, other delivery systems for hydrophobic pharmaceutical compounds may be employed. Liposomes and emulsions are well known examples of delivery vehicles or carriers for hydrophobic drugs. Certain organic solvents such as dimethylsulfoxide also may be employed, although usually at the cost of greater toxicity. Additionally, the compounds may be delivered using a sustained-release system, such as semipermeable matrices of solid hydrophobic polymers containing the therapeutic agent. Various types of sustained-release materials have been established and are well known by those skilled in the art. Sustained-release capsules may, depending on their chemical nature, release the compounds for a few weeks up to over 100 days. Depending on the chemical nature and the biological stability of the therapeutic reagent, additional strategies for protein or other active ingredient stabilization may be employed.

The pharmaceutical compositions also may comprise suitable solid or gel phase carriers or excipients. Examples of such carriers or excipients include but are not limited to calcium carbonate, calcium phosphate, various sugars, starches, cellulose derivatives, gelatin, and polymers such as polyethylene glycols. Many of the active ingredients of the invention may be provided as salts with pharmaceutically compatible counter ions. Such pharmaceutically acceptable base addition salts are those salts which retain the biological effectiveness and properties of the free acids and which are obtained by reaction with inorganic or organic bases such as sodium hydroxide, magnesium hydroxide, ammonia, trialkylamine, dialkylamine, monoalkylamine, dibasic amino acids, sodium acetate, potassium benzoate, triethanol amine and the like.

The pharmaceutical composition of the invention may be in the form of a complex of the protein(s) or other active ingredient(s) of present invention along with protein or peptide antigens. The protein and/or peptide antigen will deliver a stimulatory signal to both B and T lymphocytes. B-lymphocytes will respond to antigen through their surface immunoglobulin receptor. T lymphocytes will respond to antigen through the T cell receptor (TCR) following presentation of the antigen by MHC proteins. MHC and structurally related proteins including those encoded by class I and class II MHC genes on host cells will serve to present the peptide antigen(s) to T lymphocytes. The antigen components could also be supplied as purified MHC-peptide complexes alone or with co-stimulatory molecules that can directly signal T cells. Alternatively antibodies able to bind surface immunoglobulin and other molecules on B cells as well as antibodies able to bind the TCR and other molecules on T cells can be combined with the pharmaceutical composition of the invention.

The pharmaceutical composition of the invention may be in the form of a liposome in which protein of the present invention is combined, in addition to other pharmaceutically acceptable carriers, with amphipathic agents such as lipids which exist in aggregated form as micelles, insoluble monolayers, liquid crystals, or lamellar layers in aqueous solution. Suitable lipids for liposomal formulation include, without limitation, monoglycerides, diglycerides, sulfatides, lysolecithins, phospholipids, saponin, bile acids, and the like. Preparation of such liposomal formulations is within the level of skill in the art, as disclosed, for example, in U.S. Patent Nos. 4,235,871; 4,501,728; 4,837,028; and 4,737,323, all of which are incorporated herein by reference.

The amount of protein or other active ingredient of the present invention in the pharmaceutical composition of the present invention will depend upon the nature and severity of the condition being treated, and on the nature of prior treatments which the patient has undergone. Ultimately, the attending physician will decide the amount of protein or other active ingredient of the present invention with which to treat each individual patient. Initially, the attending physician will administer low doses of protein or other active ingredient of the present invention and observe the patient's response. Larger doses of protein or other active ingredient of the present invention may be administered until the optimal therapeutic effect is obtained for the patient, and at that point the dosage is not increased further. It is contemplated that the various pharmaceutical compositions used to practice the method of the present invention should contain about 0.01 μg to about 100 mg (preferably about 0.1 μg to about 10 mg, more preferably about 0.1 μg to about 1 mg) of protein or other active ingredient of the present invention per kg body weight. For compositions of the present invention which are useful for bone, cartilage, tendon or ligament regeneration, the therapeutic method includes administering the composition topically, systematically, or locally as an implant or device. When administered, the therapeutic composition for use in this invention is, of course, in a pyrogen-free, physiologically acceptable form. Further, the composition may desirably be encapsulated or injected in a viscous form for delivery to the site of bone, cartilage or tissue damage. Topical administration may be suitable for wound healing and tissue repair. Therapeutically useful agents other than a protein or other active ingredient of the invention which may also optionally be included in the composition as described above, may alternatively or additionally, be administered simultaneously or sequentially with the composition in the methods of the invention. Preferably for bone and/or cartilage formation, the composition would include a matrix capable of delivering the protein-containing or other active ingredient-containing composition to the site of bone and/or cartilage damage, providing a structure for the developing bone and cartilage and optimally

capable of being resorbed into the body. Such matrices may be formed of materials presently in use for other implanted medical applications.

The choice of matrix material is based on biocompatibility, biodegradability, mechanical properties, cosmetic appearance and interface properties. The particular application of the compositions will define the appropriate formulation. Potential matrices for the compositions may be biodegradable and chemically defined calcium sulfate, tricalcium phosphate, hydroxyapatite, polylactic acid, polyglycolic acid and polyanhydrides. Other potential materials are biodegradable and biologically well-defined, such as bone or dermal collagen. Further matrices are comprised of pure proteins or extracellular matrix components. Other potential matrices are nonbiodegradable and chemically defined, such as sintered hydroxyapatite, bioglass, aluminates, or other ceramics. Matrices may be comprised of combinations of any of the above-mentioned types of material, such as polylactic acid and hydroxyapatite or collagen and tricalcium phosphate. The bioceramics may be altered in composition, such as in calcium-aluminate-phosphate and processing to alter pore size, particle size, particle shape, and biodegradability. Presently preferred is a 50:50 (mole weight) copolymer of lactic acid and glycolic acid in the form of porous particles having diameters ranging from 150 to 800 microns. In some applications, it will be useful to utilize a sequestering agent, such as carboxymethyl cellulose or autologous blood clot, to prevent the protein compositions from disassociating from the matrix.

A preferred family of sequestering agents is cellulosic materials such as alkylcelluloses (including hydroxyalkylcelluloses), including methylcellulose, ethylcellulose, hydroxyethylcellulose, hydroxypropylcellulose, hydroxypropyl-methylcellulose, and carboxymethylcellulose, the most preferred being cationic salts of carboxymethylcellulose (CMC). Other preferred sequestering agents include hyaluronic acid, sodium alginate, poly(ethylene glycol), polyoxyethylene oxide, carboxyvinyl polymer and poly(vinyl alcohol). The amount of sequestering agent useful herein is 0.5-20 wt %, preferably 1-10 wt % based on total formulation weight, which represents the amount necessary to prevent desorption of the protein from the polymer matrix and to provide appropriate handling of the composition, yet not so much that the progenitor cells are prevented from infiltrating the matrix, thereby providing the protein the opportunity to assist the osteogenic activity of the progenitor cells. In further compositions, proteins or other active ingredients of the invention may be combined with other agents beneficial to the treatment of the bone and/or cartilage defect, wound, or tissue in question. These agents include various growth factors such as epidermal growth factor (EGF), platelet derived growth factor (PDGF), transforming growth factors (TGF- α and TGF- β), and insulin-like growth factor (IGF).

The therapeutic compositions are also presently valuable for veterinary applications. Particularly domestic animals and thoroughbred horses, in addition to humans, are desired patients for such treatment with proteins or other active ingredients of the present invention. The dosage regimen of a protein-containing pharmaceutical composition to be used in tissue
5 regeneration will be determined by the attending physician considering various factors which modify the action of the proteins, *e.g.*, amount of tissue weight desired to be formed, the site of damage, the condition of the damaged tissue, the size of a wound, type of damaged tissue (*e.g.*, bone), the patient's age, sex, and diet, the severity of any infection, time of administration and other clinical factors. The dosage may vary with the type of matrix used in the reconstitution
10 and with inclusion of other proteins in the pharmaceutical composition. For example, the addition of other known growth factors, such as IGF I (insulin like growth factor I), to the final composition, may also effect the dosage. Progress can be monitored by periodic assessment of tissue/bone growth and/or repair, for example, X-rays, histomorphometric determinations and tetracycline labeling.

15 Polynucleotides of the present invention can also be used for gene therapy. Such polynucleotides can be introduced either *in vivo* or *ex vivo* into cells for expression in a mammalian subject. Polynucleotides of the invention may also be administered by other known methods for introduction of nucleic acid into a cell or organism (including, without limitation, in the form of viral vectors or naked DNA). Cells may also be cultured *ex vivo* in the presence of
20 proteins of the present invention in order to proliferate or to produce a desired effect on or activity in such cells. Treated cells can then be introduced *in vivo* for therapeutic purposes.

4.12.3 EFFECTIVE DOSAGE

Pharmaceutical compositions suitable for use in the present invention include
25 compositions wherein the active ingredients are contained in an effective amount to achieve its intended purpose. More specifically, a therapeutically effective amount means an amount effective to prevent development of or to alleviate the existing symptoms of the subject being treated. Determination of the effective amount is well within the capability of those skilled in the art, especially in light of the detailed disclosure provided herein. For any compound used in
30 the method of the invention, the therapeutically effective dose can be estimated initially from appropriate *in vitro* assays. For example, a dose can be formulated in animal models to achieve a circulating concentration range that can be used to more accurately determine useful doses in humans. For example, a dose can be formulated in animal models to achieve a circulating concentration range that includes the IC_{50} as determined in cell culture (*i.e.*, the concentration of

A therapeutically effective dose refers to that amount of the compound that results in amelioration of symptoms or a prolongation of survival in a patient. Toxicity and therapeutic efficacy of such compounds can be determined by standard pharmaceutical procedures in cell cultures or experimental animals, *e.g.*, for determining the LD₅₀ (the dose lethal to 50% of the population) and the ED₅₀ (the dose therapeutically effective in 50% of the population). The dose ratio between toxic and therapeutic effects is the therapeutic index and it can be expressed as the ratio between LD₅₀ and ED₅₀. Compounds which exhibit high therapeutic indices are preferred. The data obtained from these cell culture assays and animal studies can be used in formulating a range of dosage for use in human. The dosage of such compounds lies preferably within a range of circulating concentrations that include the ED₅₀ with little or no toxicity. The dosage may vary within this range depending upon the dosage form employed and the route of administration utilized. The exact formulation, route of administration and dosage can be chosen by the individual physician in view of the patient's condition. See, *e.g.*, Fingl et al., 1975, in "The Pharmacological Basis of Therapeutics", Ch. 1 p.1. Dosage amount and interval may be adjusted individually to provide plasma levels of the active moiety which are sufficient to maintain the desired effects, or minimal effective concentration (MEC). The MEC will vary for each compound but can be estimated from *in vitro* data. Dosages necessary to achieve the MEC will depend on individual characteristics and route of administration. However, HPLC assays or bioassays can be used to determine plasma concentrations.

Dosage intervals can also be determined using MEC value. Compounds should be administered using a regimen that maintains plasma levels above the MEC for 10-90% of the time, preferably between 30-90% and most preferably between 50-90%. In cases of local administration or selective uptake, the effective local concentration of the drug may not be related to plasma concentration.

An exemplary dosage regimen for polypeptides or other compositions of the invention will be in the range of about 0.01 µg/kg to 100 mg/kg of body weight daily, with the preferred dose being about 0.1 µg/kg to 25 mg/kg of patient body weight daily, varying in adults and children. Dosing may be once daily, or equivalent doses may be delivered at longer or shorter intervals.

The amount of composition administered will, of course, be dependent on the subject being treated, on the subject's age and weight, the severity of the affliction, the manner of administration and the judgment of the prescribing physician.

4.12.4 PACKAGING

The compositions may, if desired, be presented in a pack or dispenser device which may contain one or more unit dosage forms containing the active ingredient. The pack may, for example, comprise metal or plastic foil, such as a blister pack. The pack or dispenser device may be accompanied by instructions for administration. Compositions comprising a compound of the invention formulated in a compatible pharmaceutical carrier may also be prepared, placed in an appropriate container, and labeled for treatment of an indicated condition.

4.13 ANTIBODIES

Also included in the invention are antibodies to proteins, or fragments of proteins of the invention. The term "antibody" as used herein refers to immunoglobulin molecules and immunologically active portions of immunoglobulin (Ig) molecules, *i.e.*, molecules that contain an antigen-binding site that specifically binds (immunoreacts with) an antigen. Such antibodies include, but are not limited to, polyclonal, monoclonal, chimeric, single chain, F_{ab} , F_{ab}' and $F_{(ab)2}$ fragments, and an F_{ab} expression library. In general, an antibody molecule obtained from humans relates to any of the classes IgG, IgM, IgA, IgE and IgD, which differ from one another by the nature of the heavy chain present in the molecule. Certain classes have subclasses as well, such as IgG₁, IgG₂, and others. Furthermore, in humans, the light chain may be a kappa chain or a lambda chain. Reference herein to antibodies includes a reference to all such classes, subclasses and types of human antibody species.

An isolated related protein of the invention may be intended to serve as an antigen, or a portion or fragment thereof, and additionally can be used as an immunogen to generate antibodies that immunospecifically bind the antigen, using standard techniques for polyclonal and monoclonal antibody preparation. The full-length protein can be used or, alternatively, the invention provides antigenic peptide fragments of the antigen for use as immunogens. An antigenic peptide fragment comprises at least 6 amino acid residues of the amino acid sequence of any of the full length proteins of the invention, and encompasses an epitope thereof such that an antibody raised against the peptide forms a specific immune complex with the full length protein or with any fragment that contains the epitope. Preferably, the antigenic peptide comprises at least 10 amino acid residues, or at least 15 amino acid residues, or at least 20 amino acid residues, or at least 30 amino acid residues. Preferred epitopes encompassed by the antigenic peptide are regions of the protein that are located on its surface; commonly these are hydrophilic regions.

In certain embodiments of the invention, at least one epitope encompassed by the antigenic peptide is a region on the surface of the protein of the invention, *e.g.*, a hydrophilic

region. A hydrophobicity analysis of the human related protein sequence will indicate which regions of a related protein are particularly hydrophilic and, therefore, are likely to encode surface residues useful for targeting antibody production. As a means for targeting antibody production, hydropathy plots showing regions of hydrophilicity and hydrophobicity may be generated by any method well known in the art, including, for example, the Kyte Doolittle or the Hopp Woods methods, either with or without Fourier transformation. See, *e.g.*, Hopp and Woods, 1981, *Proc. Nat. Acad. Sci. USA* 78: 3824-3828; Kyte and Doolittle 1982, *J. Mol. Biol.* 157: 105-142, each of which is incorporated herein by reference in its entirety. Antibodies that are specific for one or more domains within an antigenic protein, or derivatives, fragments, analogs or homologs thereof, are also provided herein.

A protein of the invention, or a derivative, fragment, analog, homolog or ortholog thereof, may be utilized as an immunogen in the generation of antibodies that immunospecifically bind these protein components.

Various procedures known within the art may be used for the production of polyclonal or monoclonal antibodies directed against a protein of the invention, or against derivatives, fragments, analogs homologs or orthologs thereof (see, for example, *Antibodies: A Laboratory Manual*, Harlow E, and Lane D, 1988, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY, incorporated herein by reference). Some of these antibodies are discussed below.

5.13.1 Polyclonal Antibodies

For the production of polyclonal antibodies, various suitable host animals (*e.g.*, rabbit, goat, mouse or other mammal) may be immunized by one or more injections with the native protein, a synthetic variant thereof, or a derivative of the foregoing. An appropriate immunogenic preparation can contain, for example, the naturally occurring immunogenic protein, a chemically synthesized polypeptide representing the immunogenic protein, or a recombinantly expressed immunogenic protein. Furthermore, the protein may be conjugated to a second protein known to be immunogenic in the mammal being immunized. Examples of such immunogenic proteins include but are not limited to keyhole limpet hemocyanin, serum albumin, bovine thyroglobulin, and soybean trypsin inhibitor. The preparation can further include an adjuvant. Various adjuvants used to increase the immunological response include, but are not limited to, Freund's (complete and incomplete), mineral gels (*e.g.*, aluminum hydroxide), surface active substances (*e.g.*, lysolecithin, pluronic polyols, polyanions, peptides, oil emulsions, dinitrophenol, etc.), adjuvants usable in humans such as Bacille Calmette-Guerin and *Corynebacterium parvum*, or similar immunostimulatory agents. Additional examples of

adjuvants which can be employed include MPL-TDM adjuvant (monophosphoryl Lipid A, synthetic trehalose dicorynomycolate).

The polyclonal antibody molecules directed against the immunogenic protein can be isolated from the mammal (*e.g.*, from the blood) and further purified by well known techniques, such as affinity chromatography using protein A or protein G, which provide primarily the IgG fraction of immune serum. Subsequently, or alternatively, the specific antigen which is the target of the immunoglobulin sought, or an epitope thereof, may be immobilized on a column to purify the immune specific antibody by immunoaffinity chromatography. Purification of immunoglobulins is discussed, for example, by D. Wilkinson (*The Scientist*, published by The Scientist, Inc., Philadelphia PA, Vol. 14, No. 8 (April 17, 2000), pp. 25-28).

5.13.2 Monoclonal Antibodies

The term "monoclonal antibody" (MAb) or "monoclonal antibody composition", as used herein, refers to a population of antibody molecules that contain only one molecular species of antibody molecule consisting of a unique light chain gene product and a unique heavy chain gene product. In particular, the complementarity determining regions (CDRs) of the monoclonal antibody are identical in all the molecules of the population. MAbs thus contain an antigen-binding site capable of immunoreacting with a particular epitope of the antigen characterized by a unique binding affinity for it.

Monoclonal antibodies can be prepared using hybridoma methods, such as those described by Kohler and Milstein, *Nature*, 256:495 (1975). In a hybridoma method, a mouse, hamster, or other appropriate host animal, is typically immunized with an immunizing agent to elicit lymphocytes that produce or are capable of producing antibodies that will specifically bind to the immunizing agent. Alternatively, the lymphocytes can be immunized in vitro.

The immunizing agent will typically include the protein antigen, a fragment thereof or a fusion protein thereof. Generally, either peripheral blood lymphocytes are used if cells of human origin are desired, or spleen cells or lymph node cells are used if non-human mammalian sources are desired. The lymphocytes are then fused with an immortalized cell line using a suitable fusing agent, such as polyethylene glycol, to form a hybridoma cell (Goding, Monoclonal Antibodies: Principles and Practice, Academic Press, (1986) pp. 59-103). Immortalized cell lines are usually transformed mammalian cells, particularly myeloma cells of rodent, bovine and human origin. Usually, rat or mouse myeloma cell lines are employed. The hybridoma cells can be cultured in a suitable culture medium that preferably contains one or more substances that inhibit the growth or survival of the unfused, immortalized cells. For example, if the parental cells lack the enzyme hypoxanthine guanine phosphoribosyl transferase (HGPRT or HPRT), the

culture medium for the hybridomas typically will include hypoxanthine, aminopterin, and thymidine ("HAT medium"), which substances prevent the growth of HGPRT-deficient cells.

Preferred immortalized cell lines are those that fuse efficiently, support stable high level expression of antibody by the selected antibody-producing cells, and are sensitive to a medium such as HAT medium. More preferred immortalized cell lines are murine myeloma lines, which can be obtained, for instance, from the Salk Institute Cell Distribution Center, San Diego, California and the American Type Culture Collection, Manassas, Virginia. Human myeloma and mouse-human heteromyeloma cell lines also have been described for the production of human monoclonal antibodies (Kozbor, J. Immunol., 133:3001 (1984); Brodeur et al., Monoclonal Antibody Production Techniques and Applications, Marcel Dekker, Inc., New York, (1987) pp. 51-63).

The culture medium in which the hybridoma cells are cultured can then be assayed for the presence of monoclonal antibodies directed against the antigen. Preferably, the binding specificity of monoclonal antibodies produced by the hybridoma cells is determined by immunoprecipitation or by an in vitro binding assay, such as radioimmunoassay (RIA) or enzyme-linked immunoabsorbent assay (ELISA). Such techniques and assays are known in the art. The binding affinity of the monoclonal antibody can, for example, be determined by the Scatchard analysis of Munson and Pollard, Anal. Biochem., 107:220 (1980). Preferably, antibodies having a high degree of specificity and a high binding affinity for the target antigen are isolated.

After the desired hybridoma cells are identified, the clones can be subcloned by limiting dilution procedures and grown by standard methods. Suitable culture media for this purpose include, for example, Dulbecco's Modified Eagle's Medium and RPMI-1640 medium. Alternatively, the hybridoma cells can be grown in vivo as ascites in a mammal.

The monoclonal antibodies secreted by the subclones can be isolated or purified from the culture medium or ascites fluid by conventional immunoglobulin purification procedures such as, for example, protein A-Sepharose, hydroxylapatite chromatography, gel electrophoresis, dialysis, or affinity chromatography.

The monoclonal antibodies can also be made by recombinant DNA methods, such as those described in U.S. Patent No. 4,816,567. DNA encoding the monoclonal antibodies of the invention can be readily isolated and sequenced using conventional procedures (*e.g.*, by using oligonucleotide probes that are capable of binding specifically to genes encoding the heavy and light chains of murine antibodies). The hybridoma cells of the invention serve as a preferred source of such DNA. Once isolated, the DNA can be placed into expression vectors, which are then transfected into host cells such as simian COS cells, Chinese hamster ovary (CHO) cells, or

myeloma cells that do not otherwise produce immunoglobulin protein, to obtain the synthesis of monoclonal antibodies in the recombinant host cells. The DNA also can be modified, for example, by substituting the coding sequence for human heavy and light chain constant domains in place of the homologous murine sequences (U.S. Patent No. 4,816,567; Morrison, Nature 368, 812-13 (1994)) or by covalently joining to the immunoglobulin coding sequence all or part of the coding sequence for a non-immunoglobulin polypeptide. Such a non-immunoglobulin polypeptide can be substituted for the constant domains of an antibody of the invention, or can be substituted for the variable domains of one antigen-combining site of an antibody of the invention to create a chimeric bivalent antibody.

5.13.2 Humanized Antibodies

The antibodies directed against the protein antigens of the invention can further comprise humanized antibodies or human antibodies. These antibodies are suitable for administration to humans without engendering an immune response by the human against the administered immunoglobulin. Humanized forms of antibodies are chimeric immunoglobulins, immunoglobulin chains or fragments thereof (such as Fv, Fab, Fab', F(ab')₂ or other antigen-binding subsequences of antibodies) that are principally comprised of the sequence of a human immunoglobulin, and contain minimal sequence derived from a non-human immunoglobulin. Humanization can be performed following the method of Winter and co-workers (Jones et al., Nature, 321:522-525 (1986); Riechmann et al., Nature, 332:323-327 (1988); Verhoeven et al., Science, 239:1534-1536 (1988)), by substituting rodent CDRs or CDR sequences for the corresponding sequences of a human antibody. (See also U.S. Patent No. 5,225,539.) In some instances, Fv framework residues of the human immunoglobulin are replaced by corresponding non-human residues. Humanized antibodies can also comprise residues which are found neither in the recipient antibody nor in the imported CDR or framework sequences. In general, the humanized antibody will comprise substantially all of at least one, and typically two, variable domains, in which all or substantially all of the CDR regions correspond to those of a non-human immunoglobulin and all or substantially all of the framework regions are those of a human immunoglobulin consensus sequence. The humanized antibody optimally also will comprise at least a portion of an immunoglobulin constant region (Fc), typically that of a human immunoglobulin (Jones et al., 1986; Riechmann et al., 1988; and Presta, Curr. Op. Struct. Biol., 2:593-596 (1992)).

5.13.3 Human Antibodies

Fully human antibodies relate to antibody molecules in which essentially the entire sequences of both the light chain and the heavy chain, including the CDRs, arise from human genes. Such antibodies are termed "human antibodies", or "fully human antibodies" herein. Human monoclonal antibodies can be prepared by the trioma technique; the human B-cell hybridoma technique (see Kozbor, et al., 1983 Immunol Today 4: 72) and the EBV hybridoma technique to produce human monoclonal antibodies (see Cole, et al., 1985 In: MONOCLONAL ANTIBODIES AND CANCER THERAPY, Alan R. Liss, Inc., pp. 77-96). Human monoclonal antibodies may be utilized in the practice of the present invention and may be produced by using human hybridomas (see Cote, et al., 1983. Proc Natl Acad Sci USA 80: 2026-2030) or by transforming human B-cells with Epstein Barr Virus in vitro (see Cole, et al., 1985 In: MONOCLONAL ANTIBODIES AND CANCER THERAPY, Alan R. Liss, Inc., pp. 77-96).

In addition, human antibodies can also be produced using additional techniques, including phage display libraries (Hoogenboom and Winter, J. Mol. Biol., 227:381 (1991); Marks et al., J. Mol. Biol., 222:581 (1991)). Similarly, human antibodies can be made by introducing human immunoglobulin loci into transgenic animals, *e.g.*, mice in which the endogenous immunoglobulin genes have been partially or completely inactivated. Upon challenge, human antibody production is observed, which closely resembles that seen in humans in all respects, including gene rearrangement, assembly, and antibody repertoire. This approach is described, for example, in U.S. Patent Nos. 5,545,807; 5,545,806; 5,569,825; 5,625,126; 5,633,425; 5,661,016, and in Marks et al. (Bio/Technology 10, 779-783 (1992)); Lonberg et al. (Nature 368 856-859 (1994)); Morrison (Nature 368, 812-13 (1994)); Fishwild et al. (Nature Biotechnology 14, 845-51 (1996)); Neuberger (Nature Biotechnology 14, 826 (1996)); and Lonberg and Huszar (Intern. Rev. Immunol. 13 65-93 (1995)).

Human antibodies may additionally be produced using transgenic nonhuman animals which are modified so as to produce fully human antibodies rather than the animal's endogenous antibodies in response to challenge by an antigen. (See PCT publication WO94/02602). The endogenous genes encoding the heavy and light immunoglobulin chains in the nonhuman host have been incapacitated, and active loci encoding human heavy and light chain immunoglobulins are inserted into the host's genome. The human genes are incorporated, for example, using yeast artificial chromosomes containing the requisite human DNA segments. An animal which provides all the desired modifications is then obtained as progeny by crossbreeding intermediate transgenic animals containing fewer than the full complement of the modifications. The preferred embodiment of such a nonhuman animal is a mouse, and is termed the XenomouseTM as disclosed in PCT publications WO 96/33735 and WO 96/34096. This animal produces B cells which secrete fully human immunoglobulins. The antibodies can be obtained directly from

the animal after immunization with an immunogen of interest, as, for example, a preparation of a polyclonal antibody, or alternatively from immortalized B cells derived from the animal, such as hybridomas producing monoclonal antibodies. Additionally, the genes encoding the immunoglobulins with human variable regions can be recovered and expressed to obtain the antibodies directly, or can be further modified to obtain analogs of antibodies such as, for example, single chain Fv molecules.

An example of a method of producing a nonhuman host, exemplified as a mouse, lacking expression of an endogenous immunoglobulin heavy chain is disclosed in U.S. Patent No. 5,939,598. It can be obtained by a method including deleting the J segment genes from at least one endogenous heavy chain locus in an embryonic stem cell to prevent rearrangement of the locus and to prevent formation of a transcript of a rearranged immunoglobulin heavy chain locus, the deletion being effected by a targeting vector containing a gene encoding a selectable marker; and producing from the embryonic stem cell a transgenic mouse whose somatic and germ cells contain the gene encoding the selectable marker.

A method for producing an antibody of interest, such as a human antibody, is disclosed in U.S. Patent No. 5,916,771. It includes introducing an expression vector that contains a nucleotide sequence encoding a heavy chain into one mammalian host cell in culture, introducing an expression vector containing a nucleotide sequence encoding a light chain into another mammalian host cell, and fusing the two cells to form a hybrid cell. The hybrid cell expresses an antibody containing the heavy chain and the light chain.

In a further improvement on this procedure, a method for identifying a clinically relevant epitope on an immunogen, and a correlative method for selecting an antibody that binds immunospecifically to the relevant epitope with high affinity, are disclosed in PCT publication WO 99/53049.

5.13.4 F_{ab} Fragments and Single Chain Antibodies

According to the invention, techniques can be adapted for the production of single-chain antibodies specific to an antigenic protein of the invention (see *e.g.*, U.S. Patent No. 4,946,778). In addition, methods can be adapted for the construction of F_{ab} expression libraries (see *e.g.*, Huse, et al., 1989 Science 246: 1275-1281) to allow rapid and effective identification of monoclonal F_{ab} fragments with the desired specificity for a protein or derivatives, fragments, analogs or homologs thereof. Antibody fragments that contain the idiotypes to a protein antigen may be produced by techniques known in the art including, but not limited to: (i) an F_{(ab)²} fragment produced by pepsin digestion of an antibody molecule; (ii) an F_{ab} fragment generated

by reducing the disulfide bridges of an $F_{(ab)2}$ fragment; (iii) an F_{ab} fragment generated by the treatment of the antibody molecule with papain and a reducing agent and (iv) F_v fragments.

5.13.5 Bispecific Antibodies

5 Bispecific antibodies are monoclonal, preferably human or humanized, antibodies that have binding specificities for at least two different antigens. In the present case, one of the binding specificities is for an antigenic protein of the invention. The second binding target is any other antigen, and advantageously is a cell-surface protein or receptor or receptor subunit.

Methods for making bispecific antibodies are known in the art. Traditionally, the
10 recombinant production of bispecific antibodies is based on the co-expression of two immunoglobulin heavy-chain/light-chain pairs, where the two heavy chains have different specificities (Milstein and Cuello, *Nature*, 305:537-539 (1983)). Because of the random assortment of immunoglobulin heavy and light chains, these hybridomas (quadromas) produce a potential mixture of ten different antibody molecules, of which only one has the correct
15 bispecific structure. The purification of the correct molecule is usually accomplished by affinity chromatography steps. Similar procedures are disclosed in WO 93/08829, published 13 May 1993, and in Traunecker *et al.*, 1991 *EMBO J.*, 10:3655-3659.

Antibody variable domains with the desired binding specificities (antibody-antigen combining sites) can be fused to immunoglobulin constant domain sequences. The fusion
20 preferably is with an immunoglobulin heavy-chain constant domain, comprising at least part of the hinge, CH2, and CH3 regions. It is preferred to have the first heavy-chain constant region (CH1) containing the site necessary for light-chain binding present in at least one of the fusions. DNAs encoding the immunoglobulin heavy-chain fusions and, if desired, the immunoglobulin light chain, are inserted into separate expression vectors, and are co-transfected into a suitable
25 host organism. For further details of generating bispecific antibodies see, for example, Suresh *et al.*, *Methods in Enzymology*, 121:210 (1986).

According to another approach described in WO 96/27011, the interface between a pair of antibody molecules can be engineered to maximize the percentage of heterodimers which are recovered from recombinant cell culture. The preferred interface comprises at least a part of the
30 CH3 region of an antibody constant domain. In this method, one or more small amino acid side chains from the interface of the first antibody molecule are replaced with larger side chains (*e.g.* tyrosine or tryptophan). Compensatory "cavities" of identical or similar size to the large side chain(s) are created on the interface of the second antibody molecule by replacing large amino acid side chains with smaller ones (*e.g.* alanine or threonine). This provides a mechanism for
35 increasing the yield of the heterodimer over other unwanted end-products such as homodimers.

Bispecific antibodies can be prepared as full length antibodies or antibody fragments (*e.g.* $F(ab')_2$ bispecific antibodies). Techniques for generating bispecific antibodies from antibody fragments have been described in the literature. For example, bispecific antibodies can be prepared using chemical linkage. Brennan et al., Science 229:81 (1985) describe a procedure wherein intact antibodies are proteolytically cleaved to generate $F(ab')_2$ fragments. These fragments are reduced in the presence of the dithiol complexing agent sodium arsenite to stabilize vicinal dithiols and prevent intermolecular disulfide formation. The Fab' fragments generated are then converted to thionitrobenzoate (TNB) derivatives. One of the Fab'-TNB derivatives is then reconverted to the Fab'-thiol by reduction with mercaptoethylamine and is mixed with an equimolar amount of the other Fab'-TNB derivative to form the bispecific antibody. The bispecific antibodies produced can be used as agents for the selective immobilization of enzymes.

Additionally, Fab' fragments can be directly recovered from *E. coli* and chemically coupled to form bispecific antibodies. Shalaby et al., J. Exp. Med. 175:217-225 (1992) describe the production of a fully humanized bispecific antibody $F(ab')_2$ molecule. Each Fab' fragment was separately secreted from *E. coli* and subjected to directed chemical coupling *in vitro* to form the bispecific antibody. The bispecific antibody thus formed was able to bind to cells overexpressing the ErbB2 receptor and normal human T cells, as well as trigger the lytic activity of human cytotoxic lymphocytes against human breast tumor targets.

Various techniques for making and isolating bispecific antibody fragments directly from recombinant cell culture have also been described. For example, bispecific antibodies have been produced using leucine zippers. Kostelny et al., J. Immunol. 148(5):1547-1553 (1992). The leucine zipper peptides from the Fos and Jun proteins were linked to the Fab' portions of two different antibodies by gene fusion. The antibody homodimers were reduced at the hinge region to form monomers and then re-oxidized to form the antibody heterodimers. This method can also be utilized for the production of antibody homodimers. The "diabody" technology described by Hollinger et al., Proc. Natl. Acad. Sci. USA 90:6444-6448 (1993) has provided an alternative mechanism for making bispecific antibody fragments. The fragments comprise a heavy-chain variable domain (V_H) connected to a light-chain variable domain (V_L) by a linker which is too short to allow pairing between the two domains on the same chain. Accordingly, the V_H and V_L domains of one fragment are forced to pair with the complementary V_L and V_H domains of another fragment, thereby forming two antigen-binding sites. Another strategy for making bispecific antibody fragments by the use of single-chain Fv (sFv) dimers has also been reported. See, Gruber et al., J. Immunol. 152:5368 (1994).

Antibodies with more than two valencies are contemplated. For example, trispecific antibodies can be prepared. Tutt et al., J. Immunol. 147:60 (1991).

Exemplary bispecific antibodies can bind to two different epitopes, at least one of which originates in the protein antigen of the invention. Alternatively, an anti-antigenic arm of an immunoglobulin molecule can be combined with an arm which binds to a triggering molecule on a leukocyte such as a T-cell receptor molecule (*e.g.* CD2, CD3, CD28, or B7), or Fc receptors for IgG (FcγR), such as FcγRI (CD64), FcγRII (CD32) and FcγRIII (CD16) so as to focus cellular defense mechanisms to the cell expressing the particular antigen. Bispecific antibodies can also be used to direct cytotoxic agents to cells which express a particular antigen. These antibodies possess an antigen-binding arm and an arm which binds a cytotoxic agent or a radionuclide chelator, such as EOTUBE, DPTA, DOTA, or TETA. Another bispecific antibody of interest binds the protein antigen described herein and further binds tissue factor (TF).

5.13.6 Heteroconjugate Antibodies

Heteroconjugate antibodies are also within the scope of the present invention. Heteroconjugate antibodies are composed of two covalently joined antibodies. Such antibodies have, for example, been proposed to target immune system cells to unwanted cells (U.S. Patent No. 4,676,980), and for treatment of HIV infection (WO 91/00360; WO 92/200373; EP 03089). It is contemplated that the antibodies can be prepared *in vitro* using known methods in synthetic protein chemistry, including those involving crosslinking agents. For example, immunotoxins can be constructed using a disulfide exchange reaction or by forming a thioether bond. Examples of suitable reagents for this purpose include iminothiolate and methyl-4-mercaptobutyrimidate and those disclosed, for example, in U.S. Patent No. 4,676,980.

5.13.7 Effector Function Engineering

It can be desirable to modify the antibody of the invention with respect to effector function, so as to enhance, *e.g.*, the effectiveness of the antibody in treating cancer. For example, cysteine residue(s) can be introduced into the Fc region, thereby allowing interchain disulfide bond formation in this region. The homodimeric antibody thus generated can have improved internalization capability and/or increased complement-mediated cell killing and antibody-dependent cellular cytotoxicity (ADCC). See Caron et al., *J. Exp Med.*, 176: 1191-1195 (1992) and Shopes, *J. Immunol.*, 148: 2918-2922 (1992). Homodimeric antibodies with enhanced anti-tumor activity can also be prepared using heterobifunctional cross-linkers as described in Wolff et al. *Cancer Research*, 53: 2560-2565 (1993). Alternatively, an antibody can

be engineered that has dual Fc regions and can thereby have enhanced complement lysis and ADCC capabilities. See Stevenson et al., *Anti-Cancer Drug Design*, 3: 219-230 (1989).

5.13.8 Immunoconjugates

5 The invention also pertains to immunoconjugates comprising an antibody conjugated to a cytotoxic agent such as a chemotherapeutic agent, toxin (*e.g.*, an enzymatically active toxin of bacterial, fungal, plant, or animal origin, or fragments thereof), or a radioactive isotope (*i.e.*, a radioconjugate).

Chemotherapeutic agents useful in the generation of such immunoconjugates have been described above. Enzymatically active toxins and fragments thereof that can be used include diphtheria A chain, nonbinding active fragments of diphtheria toxin, exotoxin A chain (from *Pseudomonas aeruginosa*), ricin A chain, abrin A chain, modeccin A chain, alpha-sarcin, Aleurites fordii proteins, dianthin proteins, *Phytolaca americana* proteins (PAPI, PAPII, and PAP-S), momordica charantia inhibitor, curcin, crotin, *sapaonaria officinalis* inhibitor, gelonin, mitogellin, restrictocin, phenomycin, enomycin, and the tricothecenes. A variety of radionuclides are available for the production of radioconjugated antibodies. Examples include ^{212}Bi , ^{131}I , ^{131}In , ^{90}Y , and ^{186}Re .

Conjugates of the antibody and cytotoxic agent are made using a variety of bifunctional protein-coupling agents such as N-succinimidyl-3-(2-pyridyldithiol) propionate (SPDP), iminothiolane (IT), bifunctional derivatives of imidoesters (such as dimethyl adipimidate HCL), active esters (such as disuccinimidyl suberate), aldehydes (such as glutaraldehyde), bis-azido compounds (such as bis (p-azidobenzoyl) hexanediamine), bis-diazonium derivatives (such as bis-(p-diazoniumbenzoyl)-ethylenediamine), diisocyanates (such as tolyene 2,6-diisocyanate), and bis-active fluorine compounds (such as 1,5-difluoro-2,4-dinitrobenzene). For example, a ricin immunotoxin can be prepared as described in Vitetta et al., *Science*, 238: 1098 (1987). Carbon-14-labeled 1-isothiocyanatobenzyl-3-methyldiethylene triaminepentaacetic acid (MX-DTPA) is an exemplary chelating agent for conjugation of radionucleotide to the antibody. See WO94/11026.

In another embodiment, the antibody can be conjugated to a "receptor" (such streptavidin) for utilization in tumor pretargeting wherein the antibody-receptor conjugate is administered to the patient, followed by removal of unbound conjugate from the circulation using a clearing agent and then administration of a "ligand" (*e.g.*, avidin) that is in turn conjugated to a cytotoxic agent.

4.14 COMPUTER READABLE SEQUENCES

In one application of this embodiment, a nucleotide sequence of the present invention can be recorded on computer readable media. As used herein, "computer readable media" refers to any medium which can be read and accessed directly by a computer. Such media include, but are not limited to: magnetic storage media, such as floppy discs, hard disc storage medium, and magnetic tape; optical storage media such as CD-ROM; electrical storage media such as RAM and ROM; and hybrids of these categories such as magnetic/optical storage media. A skilled artisan can readily appreciate how any of the presently known computer readable mediums can be used to create a manufacture comprising computer readable medium having recorded thereon a nucleotide sequence of the present invention. As used herein, "recorded" refers to a process for storing information on computer readable medium. A skilled artisan can readily adopt any of the presently known methods for recording information on computer readable medium to generate manufactures comprising the nucleotide sequence information of the present invention.

A variety of data storage structures are available to a skilled artisan for creating a computer readable medium having recorded thereon a nucleotide sequence of the present invention. The choice of the data storage structure will generally be based on the means chosen to access the stored information. In addition, a variety of data processor programs and formats can be used to store the nucleotide sequence information of the present invention on computer readable medium. The sequence information can be represented in a word processing text file, formatted in commercially-available software such as WordPerfect and Microsoft Word, or represented in the form of an ASCII file, stored in a database application, such as DB2, Sybase, Oracle, or the like. A skilled artisan can readily adapt any number of data processor structuring formats (*e.g.* text file or database) in order to obtain computer readable medium having recorded thereon the nucleotide sequence information of the present invention.

By providing any of the nucleotide sequences SEQ ID NO: 1-8051 or a representative fragment thereof; or a nucleotide sequence at least 95% identical to any of the nucleotide sequences of SEQ ID NO: 1-8051 in computer readable form, a skilled artisan can routinely access the sequence information for a variety of purposes. Computer software is publicly available which allows a skilled artisan to access sequence information provided in a computer readable medium. The examples which follow demonstrate how software which implements the BLAST (Altschul et al., J. Mol. Biol. 215:403-410 (1990)) and BLAZE (Brutlag et al., Comp. Chem. 17:203-207 (1993)) search algorithms on a Sybase system is used to identify open reading frames (ORFs) within a nucleic acid sequence. Such ORFs may be protein encoding fragments and may be useful in producing commercially important proteins such as enzymes used in fermentation reactions and in the production of commercially useful metabolites.

As used herein, "a computer-based system" refers to the hardware means, software means, and data storage means used to analyze the nucleotide sequence information of the present invention. The minimum hardware means of the computer-based systems of the present invention comprises a central processing unit (CPU), input means, output means, and data storage means. A skilled artisan can readily appreciate that any one of the currently available computer-based systems are suitable for use in the present invention. As stated above, the computer-based systems of the present invention comprise a data storage means having stored therein a nucleotide sequence of the present invention and the necessary hardware means and software means for supporting and implementing a search means. As used herein, "data storage means" refers to memory which can store nucleotide sequence information of the present invention, or a memory access means which can access manufactures having recorded thereon the nucleotide sequence information of the present invention.

As used herein, "search means" refers to one or more programs which are implemented on the computer-based system to compare a target sequence or target structural motif with the sequence information stored within the data storage means. Search means are used to identify fragments or regions of a known sequence which match a particular target sequence or target motif. A variety of known algorithms are disclosed publicly and a variety of commercially available software for conducting search means are and can be used in the computer-based systems of the present invention. Examples of such software includes, but is not limited to, Smith-Waterman, MacPattern (EMBL), BLASTN and BLASTA (NPOLYPEPTIDEIA). A skilled artisan can readily recognize that any one of the available algorithms or implementing software packages for conducting homology searches can be adapted for use in the present computer-based systems. As used herein, a "target sequence" can be any nucleic acid or amino acid sequence of six or more nucleotides or two or more amino acids. A skilled artisan can readily recognize that the longer a target sequence is, the less likely a target sequence will be present as a random occurrence in the database. The most preferred sequence length of a target sequence is from about 10 to 300 amino acids, more preferably from about 30 to 100 nucleotide residues. However, it is well recognized that searches for commercially important fragments, such as sequence fragments involved in gene expression and protein processing, may be of shorter length.

As used herein, "a target structural motif," or "target motif," refers to any rationally selected sequence or combination of sequences in which the sequence(s) are chosen based on a three-dimensional configuration which is formed upon the folding of the target motif. There are a variety of target motifs known in the art. Protein target motifs include, but are not limited to, enzyme active sites and signal sequences. Nucleic acid target motifs include, but are not limited

to, promoter sequences, hairpin structures and inducible expression elements (protein binding sequences).

4.15 TRIPLE HELIX FORMATION

5 In addition, the fragments of the present invention, as broadly described, can be used to control gene expression through triple helix formation or antisense DNA or RNA, both of which methods are based on the binding of a polynucleotide sequence to DNA or RNA.

Polynucleotides suitable for use in these methods are preferably 20 to 40 bases in length and are designed to be complementary to a region of the gene involved in transcription (triple helix - see 10 Lee et al., Nucl. Acids Res. 6:3073 (1979); Cooney et al., Science 15241:456 (1988); and Dervan et al., Science 251:1360 (1991)) or to the mRNA itself (antisense - Olmno, J. Neurochem.

56:560 (1991); Oligodeoxynucleotides as Antisense Inhibitors of Gene Expression, CRC Press, Boca Raton, FL (1988)). Triple helix-formation optimally results in a shut-off of RNA

transcription from DNA, while antisense RNA hybridization blocks translation of an mRNA 15 molecule into polypeptide. Both techniques have been demonstrated to be effective in model systems. Information contained in the sequences of the present invention is necessary for the design of an antisense or triple helix oligonucleotide.

4.16 DIAGNOSTIC ASSAYS AND KITS

20 The present invention further provides methods to identify the presence or expression of one of the ORFs of the present invention, or homolog thereof, in a test sample, using a nucleic acid probe or antibodies of the present invention, optionally conjugated or otherwise associated with a suitable label.

In general, methods for detecting a polynucleotide of the invention can comprise 25 contacting a sample with a compound that binds to and forms a complex with the polynucleotide for a period sufficient to form the complex, and detecting the complex, so that if a complex is detected, a polynucleotide of the invention is detected in the sample. Such methods can also comprise contacting a sample under stringent hybridization conditions with nucleic acid primers that anneal to a polynucleotide of the invention under such conditions, and amplifying annealed 30 polynucleotides, so that if a polynucleotide is amplified, a polynucleotide of the invention is detected in the sample.

In general, methods for detecting a polypeptide of the invention can comprise contacting a sample with a compound that binds to and forms a complex with the polypeptide for a period sufficient to form the complex, and detecting the complex, so that if a complex is detected, a 35 polypeptide of the invention is detected in the sample.

In detail, such methods comprise incubating a test sample with one or more of the antibodies or one or more of the nucleic acid probes of the present invention and assaying for binding of the nucleic acid probes or antibodies to components within the test sample.

Conditions for incubating a nucleic acid probe or antibody with a test sample vary.

- 5 Incubation conditions depend on the format employed in the assay, the detection methods employed, and the type and nature of the nucleic acid probe or antibody used in the assay. One skilled in the art will recognize that any one of the commonly available hybridization, amplification or immunological assay formats can readily be adapted to employ the nucleic acid probes or antibodies of the present invention. Examples of such assays can be found in Chard,
10 T., *An Introduction to Radioimmunoassay and Related Techniques*, Elsevier Science Publishers, Amsterdam, The Netherlands (1986); Bullock, G.R. et al., *Techniques in Immunocytochemistry*, Academic Press, Orlando, FL Vol. 1 (1982), Vol. 2 (1983), Vol. 3 (1985); Tijssen, P., *Practice and Theory of immunoassays: Laboratory Techniques in Biochemistry and Molecular Biology*, Elsevier Science Publishers, Amsterdam, The Netherlands (1985). The test samples of the
15 present invention include cells, protein or membrane extracts of cells, or biological fluids such as sputum, blood, serum, plasma, or urine. The test sample used in the above-described method will vary based on the assay format, nature of the detection method and the tissues, cells or extracts used as the sample to be assayed. Methods for preparing protein extracts or membrane extracts of cells are well known in the art and can be readily be adapted in order to obtain a
20 sample which is compatible with the system utilized.

- In another embodiment of the present invention, kits are provided which contain the necessary reagents to carry out the assays of the present invention. Specifically, the invention provides a compartment kit to receive, in close confinement, one or more containers which
25 comprises: (a) a first container comprising one of the probes or antibodies of the present invention; and (b) one or more other containers comprising one or more of the following: wash reagents, reagents capable of detecting presence of a bound probe or antibody.

- In detail, a compartment kit includes any kit in which reagents are contained in separate containers. Such containers include small glass containers, plastic containers or strips of plastic or paper. Such containers allows one to efficiently transfer reagents from one compartment to
30 another compartment such that the samples and reagents are not cross-contaminated, and the agents or solutions of each container can be added in a quantitative fashion from one compartment to another. Such containers will include a container which will accept the test sample, a container which contains the antibodies used in the assay, containers which contain wash reagents (such as phosphate buffered saline, Tris-buffers, etc.), and containers which
35 contain the reagents used to detect the bound antibody or probe. Types of detection reagents

include labeled nucleic acid probes, labeled secondary antibodies, or in the alternative, if the primary antibody is labeled, the enzymatic, or antibody binding reagents which are capable of reacting with the labeled antibody. One skilled in the art will readily recognize that the disclosed probes and antibodies of the present invention can be readily incorporated into one of the established kit formats which are well known in the art.

4.17 MEDICAL IMAGING

The novel polypeptides and binding partners of the invention are useful in medical imaging of sites expressing the molecules of the invention (*e.g.*, where the polypeptide of the invention is involved in the immune response, for imaging sites of inflammation or infection). See, *e.g.*, Kunkel et al., U.S. Pat. NO. 5,413,778. Such methods involve chemical attachment of a labeling or imaging agent, administration of the labeled polypeptide to a subject in a pharmaceutically acceptable carrier, and imaging the labeled polypeptide *in vivo* at the target site.

4.18 SCREENING ASSAYS

Using the isolated proteins and polynucleotides of the invention, the present invention further provides methods of obtaining and identifying agents which bind to a polypeptide encoded by an ORF corresponding to any of the nucleotide sequences set forth in SEQ ID NO: 1-8051, or bind to a specific domain of the polypeptide encoded by the nucleic acid. In detail, said method comprises the steps of:

(a) contacting an agent with an isolated protein encoded by an ORF of the present invention, or nucleic acid of the invention; and

(b) determining whether the agent binds to said protein or said nucleic acid.

In general, therefore, such methods for identifying compounds that bind to a polynucleotide of the invention can comprise contacting a compound with a polynucleotide of the invention for a time sufficient to form a polynucleotide/compound complex, and detecting the complex, so that if a polynucleotide/compound complex is detected, a compound that binds to a polynucleotide of the invention is identified.

Likewise, in general, therefore, such methods for identifying compounds that bind to a polypeptide of the invention can comprise contacting a compound with a polypeptide of the invention for a time sufficient to form a polypeptide/compound complex, and detecting the complex, so that if a polypeptide/compound complex is detected, a compound that binds to a polynucleotide of the invention is identified.

Methods for identifying compounds that bind to a polypeptide of the invention can also comprise contacting a compound with a polypeptide of the invention in a cell for a time sufficient to form a polypeptide/compound complex, wherein the complex drives expression of a receptor gene sequence in the cell, and detecting the complex by detecting reporter gene sequence expression, so that if a polypeptide/compound complex is detected, a compound that binds a polypeptide of the invention is identified.

Compounds identified via such methods can include compounds which modulate the activity of a polypeptide of the invention (that is, increase or decrease its activity, relative to activity observed in the absence of the compound). Alternatively, compounds identified via such methods can include compounds which modulate the expression of a polynucleotide of the invention (that is, increase or decrease expression relative to expression levels observed in the absence of the compound). Compounds, such as compounds identified via the methods of the invention, can be tested using standard assays well known to those of skill in the art for their ability to modulate activity/expression.

The agents screened in the above assay can be, but are not limited to, peptides, carbohydrates, vitamin derivatives, or other pharmaceutical agents. The agents can be selected and screened at random or rationally selected or designed using protein modeling techniques.

For random screening, agents such as peptides, carbohydrates, pharmaceutical agents and the like are selected at random and are assayed for their ability to bind to the protein encoded by the ORF of the present invention. Alternatively, agents may be rationally selected or designed. As used herein, an agent is said to be "rationally selected or designed" when the agent is chosen based on the configuration of the particular protein. For example, one skilled in the art can readily adapt currently available procedures to generate peptides, pharmaceutical agents and the like, capable of binding to a specific peptide sequence, in order to generate rationally designed antipeptide peptides, for example see Hurby et al., Application of Synthetic Peptides: Antisense Peptides," In Synthetic Peptides, A User's Guide, W.H. Freeman, NY (1992), pp. 289-307, and Kaspczak et al., Biochemistry 28:9230-8 (1989), or pharmaceutical agents, or the like.

In addition to the foregoing, one class of agents of the present invention, as broadly described, can be used to control gene expression through binding to one of the ORFs or EMFs of the present invention. As described above, such agents can be randomly screened or rationally designed/selected. Targeting the ORF or EMF allows a skilled artisan to design sequence specific or element specific agents, modulating the expression of either a single ORF or multiple ORFs which rely on the same EMF for expression control. One class of DNA binding agents are agents which contain base residues which hybridize or form a triple helix formation by binding to DNA or RNA. Such agents can be based on the classic phosphodiester,

ribonucleic acid backbone, or can be a variety of sulfhydryl or polymeric derivatives which have base attachment capacity.

Agents suitable for use in these methods preferably contain 20 to 40 bases and are designed to be complementary to a region of the gene involved in transcription (triple helix - see
5 Lee et al., Nucl. Acids Res. 6:3073 (1979); Cooney et al., Science 241:456 (1988); and Dervan et al., Science 251:1360 (1991)) or to the mRNA itself (antisense - Okano, J. Neurochem. 56:560 (1991); Oligodeoxynucleotides as Antisense Inhibitors of Gene Expression, CRC Press, Boca Raton, FL (1988)). Triple helix-formation optimally results in a shut-off of RNA transcription from DNA, while antisense RNA hybridization blocks translation of an mRNA molecule into
10 polypeptide. Both techniques have been demonstrated to be effective in model systems. Information contained in the sequences of the present invention is necessary for the design of an antisense or triple helix oligonucleotide and other DNA binding agents.

Agents that bind to a protein encoded by one of the ORFs of the present invention can be used as a diagnostic agent. Agents which bind to a protein encoded by one of the ORFs of the
15 present invention can be formulated using known techniques to generate a pharmaceutical composition.

4.19 USE OF NUCLEIC ACIDS AS PROBES

Another aspect of the subject invention is to provide for polypeptide-specific nucleic acid
20 hybridization probes capable of hybridizing with naturally occurring nucleotide sequences. The hybridization probes of the subject invention may be derived from any of the nucleotide sequences SEQ ID NO: 1-8051. Because the corresponding gene is only expressed in a limited number of tissues, a hybridization probe derived from any of the nucleotide sequences SEQ ID NO: 1-8051 can be used as an indicator of the presence of RNA of cell type of such a tissue
25 in a sample.

Any suitable hybridization technique can be employed, such as, for example, in situ hybridization. PCR as described in US Patents Nos. 4,683,195 and 4,965,188 provides additional uses for oligonucleotides based upon the nucleotide sequences. Such probes used in PCR may be of recombinant origin, may be chemically synthesized, or a mixture of both. The
30 probe will comprise a discrete nucleotide sequence for the detection of identical sequences or a degenerate pool of possible sequences for identification of closely related genomic sequences.

Other means for producing specific hybridization probes for nucleic acids include the cloning of nucleic acid sequences into vectors for the production of mRNA probes. Such vectors are known in the art and are commercially available and may be used to synthesize RNA probes
35 *in vitro* by means of the addition of the appropriate RNA polymerase as T7 or SP6 RNA

polymerase and the appropriate radioactively labeled nucleotides. The nucleotide sequences may be used to construct hybridization probes for mapping their respective genomic sequences. The nucleotide sequence provided herein may be mapped to a chromosome or specific regions of a chromosome using well known genetic and/or chromosomal mapping techniques. These techniques include in situ hybridization, linkage analysis against known chromosomal markers, hybridization screening with libraries or flow-sorted chromosomal preparations specific to known chromosomes, and the like. The technique of fluorescent in situ hybridization of chromosome spreads has been described, among other places, in Verma et al (1988) Human Chromosomes: A Manual of Basic Techniques, Pergamon Press, New York NY.

Fluorescent *in situ* hybridization of chromosomal preparations and other physical chromosome mapping techniques may be correlated with additional genetic map data. Examples of genetic map data can be found in the 1994 Genome Issue of Science (265:1981f). Correlation between the location of a nucleic acid on a physical chromosomal map and a specific disease (or predisposition to a specific disease) may help delimit the region of DNA associated with that genetic disease. The nucleotide sequences of the subject invention may be used to detect differences in gene sequences between normal, carrier or affected individuals.

4.20 PREPARATION OF SUPPORT BOUND OLIGONUCLEOTIDES

Oligonucleotides, *i.e.*, small nucleic acid segments, may be readily prepared by, for example, directly synthesizing the oligonucleotide by chemical means, as is commonly practiced using an automated oligonucleotide synthesizer.

Support bound oligonucleotides may be prepared by any of the methods known to those of skill in the art using any suitable support such as glass, polystyrene or Teflon. One strategy is to precisely spot oligonucleotides synthesized by standard synthesizers. Immobilization can be achieved using passive adsorption (Inouye & Hondo, (1990) J. Clin. Microbiol. 28(6) 1469-72); using UV light (Nagata *et al.*, 1985; Dahlen *et al.*, 1987; Morrissey & Collins, (1989) Mol. Cell Probes 3(2) 189-207) or by covalent binding of base modified DNA (Keller *et al.*, 1988; 1989); all references being specifically incorporated herein.

Another strategy that may be employed is the use of the strong biotin-streptavidin interaction as a linker. For example, Broude *et al.* (1994) Proc. Natl. Acad. Sci. USA 91(8) 3072-6, describe the use of biotinylated probes, although these are duplex probes, that are immobilized on streptavidin-coated magnetic beads. Streptavidin-coated beads may be purchased from Dynal, Oslo. Of course, this same linking chemistry is applicable to coating any surface with streptavidin. Biotinylated probes may be purchased from various sources, such as, *e.g.*, Operon Technologies (Alameda, CA).

Nunc Laboratories (Naperville, IL) is also selling suitable material that could be used. Nunc Laboratories have developed a method by which DNA can be covalently bound to the microwell surface termed CovaLink NH. CovaLink NH is a polystyrene surface grafted with secondary amino groups ($>NH$) that serve as bridge-heads for further covalent coupling. CovaLink Modules may be purchased from Nunc Laboratories. DNA molecules may be bound to CovaLink exclusively at the 5'-end by a phosphoramidate bond, allowing immobilization of more than 1 pmol of DNA (Rasmussen *et al.*, (1991) *Anal. Biochem.* 198(1) 138-42).

The use of CovaLink NH strips for covalent binding of DNA molecules at the 5'-end has been described (Rasmussen *et al.*, (1991). In this technology, a phosphoramidate bond is employed (Chu *et al.*, (1983) *Nucleic Acids Res.* 11(8) 6513-29). This is beneficial as immobilization using only a single covalent bond is preferred. The phosphoramidate bond joins the DNA to the CovaLink NH secondary amino groups that are positioned at the end of spacer arms covalently grafted onto the polystyrene surface through a 2 nm long spacer arm. To link an oligonucleotide to CovaLink NH via an phosphoramidate bond, the oligonucleotide terminus must have a 5'-end phosphate group. It is, perhaps, even possible for biotin to be covalently bound to CovaLink and then streptavidin used to bind the probes.

More specifically, the linkage method includes dissolving DNA in water (7.5 ng/ul) and denaturing for 10 min. at 95°C and cooling on ice for 10 min. Ice-cold 0.1 M 1-methylimidazole, pH 7.0 (1-MeIm₇), is then added to a final concentration of 10 mM 1-MeIm₇. A ss DNA solution is then dispensed into CovaLink NH strips (75 ul/well) standing on ice.

Carbodiimide 0.2 M 1-ethyl-3-(3-dimethylaminopropyl)-carbodiimide (EDC), dissolved in 10 mM 1-MeIm₇, is made fresh and 25 ul added per well. The strips are incubated for 5 hours at 50°C. After incubation the strips are washed using, *e.g.*, Nunc-Immuno Wash; first the wells are washed 3 times, then they are soaked with washing solution for 5 min., and finally they are washed 3 times (where in the washing solution is 0.4 N NaOH, 0.25% SDS heated to 50°C).

It is contemplated that a further suitable method for use with the present invention is that described in PCT Patent Application WO 90/03382 (Southern & Maskos), incorporated herein by reference. This method of preparing an oligonucleotide bound to a support involves attaching a nucleoside 3'-reagent through the phosphate group by a covalent phosphodiester link to aliphatic hydroxyl groups carried by the support. The oligonucleotide is then synthesized on the supported nucleoside and protecting groups removed from the synthetic oligonucleotide chain under standard conditions that do not cleave the oligonucleotide from the support. Suitable reagents include nucleoside phosphoramidite and nucleoside hydrogen phosphorate.

An on-chip strategy for the preparation of DNA probe for the preparation of DNA probe arrays may be employed. For example, addressable laser-activated photodeprotection may be

Fodor *et al.* (1991) Science 251(4995) 767-73, incorporated herein by reference. Probes may also be immobilized on nylon supports as described by Van Ness *et al.* (1991) Nucleic Acids Res. 19(12) 3345-50; or linked to Teflon using the method of Duncan & Cavalier (1988) Anal. Biochem. 169(1) 104-8; all references being specifically incorporated herein.

To link an oligonucleotide to a nylon support, as described by Van Ness *et al.* (1991), requires activation of the nylon surface via alkylation and selective activation of the 5'-amine of oligonucleotides with cyanuric chloride.

One particular way to prepare support bound oligonucleotides is to utilize the light-generated synthesis described by Pease *et al.*, (1994) PNAS USA 91(11) 5022-6, incorporated herein by reference). These authors used current photolithographic techniques to generate arrays of immobilized oligonucleotide probes (DNA chips). These methods, in which light is used to direct the synthesis of oligonucleotide probes in high-density, miniaturized arrays, utilize photolabile 5'-protected *N*-acyl-deoxynucleoside phosphoramidites, surface linker chemistry and versatile combinatorial synthesis strategies. A matrix of 256 spatially defined oligonucleotide probes may be generated in this manner.

4.21 PREPARATION OF NUCLEIC ACID FRAGMENTS

The nucleic acids may be obtained from any appropriate source, such as cDNAs, genomic DNA, chromosomal DNA, microdissected chromosome bands, cosmid or YAC inserts, and RNA, including mRNA without any amplification steps. For example, Sambrook *et al.* (1989) describes three protocols for the isolation of high molecular weight DNA from mammalian cells (p. 9.14-9.23).

DNA fragments may be prepared as clones in M13, plasmid or lambda vectors and/or prepared directly from genomic DNA or cDNA by PCR or other amplification methods. Samples may be prepared or dispensed in multiwell plates. About 100-1000 ng of DNA samples may be prepared in 2-500 ml of final volume.

The nucleic acids would then be fragmented by any of the methods known to those of skill in the art including, for example, using restriction enzymes as described at 9.24-9.28 of Sambrook *et al.* (1989), shearing by ultrasound and NaOH treatment.

Low pressure shearing is also appropriate, as described by Schrieffer *et al.* (1990) Nucleic Acids Res. 18(24) 7455-6, incorporated herein by reference). In this method, DNA samples are passed through a small French pressure cell at a variety of low to intermediate pressures. A lever device allows controlled application of low to intermediate pressures to the cell. The results of

these studies indicate that low-pressure shearing is a useful alternative to sonic and enzymatic DNA fragmentation methods.

One particularly suitable way for fragmenting DNA is contemplated to be that using the two base recognition endonuclease, *Cvi*JI, described by Fitzgerald *et al.* (1992) *Nucleic Acids Res.*

5 20(14) 3753-62. These authors described an approach for the rapid fragmentation and fractionation of DNA into particular sizes that they contemplated to be suitable for shotgun cloning and sequencing.

The restriction endonuclease *Cvi*JI normally cleaves the recognition sequence PuGCPy between the G and C to leave blunt ends. Atypical reaction conditions, which alter the specificity of this enzyme (*Cvi*JI**), yield a quasi-random distribution of DNA fragments from the small molecule pUC19 (2688 base pairs). Fitzgerald *et al.* (1992) quantitatively evaluated the randomness of this fragmentation strategy, using a *Cvi*JI** digest of pUC19 that was size fractionated by a rapid gel filtration method and directly ligated, without end repair, to a lac Z minus M13 cloning vector. Sequence analysis of 76 clones showed that *Cvi*JI** restricts pyGCPy and 15 PuGCPu, in addition to PuGCPy sites, and that new sequence data is accumulated at a rate consistent with random fragmentation.

As reported in the literature, advantages of this approach compared to sonication and agarose gel fractionation include: smaller amounts of DNA are required (0.2-0.5 ug instead of 2-5 ug); and fewer steps are involved (no preligation, end repair, chemical extraction, or agarose gel electrophoresis and elution are needed). 20

Irrespective of the manner in which the nucleic acid fragments are obtained or prepared, it is important to denature the DNA to give single stranded pieces available for hybridization. This is achieved by incubating the DNA solution for 2-5 minutes at 80-90°C. The solution is then cooled quickly to 2°C to prevent renaturation of the DNA fragments before they are contacted with the chip. Phosphate groups must also be removed from genomic DNA by methods known in the art. 25

4.22 PREPARATION OF DNA ARRAYS

Arrays may be prepared by spotting DNA samples on a support such as a nylon membrane. Spotting may be performed by using arrays of metal pins (the positions of which correspond to an array of wells in a microtiter plate) to repeated by transfer of about 20 nl of a DNA solution to a nylon membrane. By offset printing, a density of dots higher than the density of the wells is 30 achieved. One to 25 dots may be accommodated in 1 mm², depending on the type of label used. By avoiding spotting in some preselected number of rows and columns, separate subsets (subarrays) may be formed. Samples in one subarray may be the same genomic segment of DNA (or the same gene) from different individuals, or may be different, overlapped genomic clones. Each of the

subarrays may represent replica spotting of the same samples. In one example, a selected gene segment may be amplified from 64 patients. For each patient, the amplified gene segment may be in one 96-well plate (all 96 wells containing the same sample). A plate for each of the 64 patients is prepared. By using a 96-pin device, all samples may be spotted on one 8 x 12 cm membrane.

5 Subarrays may contain 64 samples, one from each patient. Where the 96 subarrays are identical, the dot span may be 1 mm² and there may be a 1 mm space between subarrays.

Another approach is to use membranes or plates (available from NUNC, Naperville, Illinois) which may be partitioned by physical spacers *e.g.* a plastic grid molded over the membrane, the grid being similar to the sort of membrane applied to the bottom of multiwell plates, or hydrophobic
10 strips. A fixed physical spacer is not preferred for imaging by exposure to flat phosphor-storage screens or x-ray films.

The present invention is illustrated in the following examples. Upon consideration of the present disclosure, one of skill in the art will appreciate that many other embodiments and variations may be made in the scope of the present invention. Accordingly, it is intended that the broader
15 aspects of the present invention not be limited to the disclosure of the following examples. The present invention is not to be limited in scope by the exemplified embodiments which are intended as illustrations of single aspects of the invention, and compositions and methods which are functionally equivalent are within the scope of the invention. Indeed, numerous modifications and variations in the practice of the invention are expected to occur to those skilled in the art upon
20 consideration of the present preferred embodiments. Consequently, the only limitations which should be placed upon the scope of the invention are those which appear in the appended claims.

All references cited within the body of the instant specification are hereby incorporated by reference in their entirety.

5.0 EXAMPLES

25 5.1 EXAMPLE 1

Novel Nucleic Acid Sequences Obtained From Various Libraries

A plurality of novel nucleic acids were obtained from cDNA libraries prepared from various human tissues and in some cases isolated from a genomic library derived from human chromosome using standard PCR, SBH sequence signature analysis and Sanger sequencing techniques. The
30 inserts of the library were amplified with PCR using primers specific for the vector sequences which flank the inserts. Clones from cDNA libraries were spotted on nylon membrane filters and screened with oligonucleotide probes (*e.g.*, 7-mers) to obtain signature sequences. The clones were clustered into groups of similar or identical sequences. Representative clones were selected for sequencing.

In some cases, the 5' sequence of the amplified inserts was then deduced using a typical Sanger sequencing protocol. PCR products were purified and subjected to fluorescent dye terminator cycle sequencing. Single pass gel sequencing was done using a 377 Applied Biosystems (ABI) sequencer to obtain the novel nucleic acid sequences. In some cases RACE (Rapid
5 Amplification of cDNA Ends) was performed to further extend the sequence in the 5' direction.

5.2 EXAMPLE 2

Novel Contigs

The novel contigs of the invention were assembled from sequences that were obtained from
10 a cDNA library by methods described in Example 1 above, and in some cases sequences obtained from one or more public databases. The sequences for the resulting nucleic acid contigs are designated as SEQ ID NO: 1-8051 and are provided in the attached Sequence Listing. The contigs were assembled using an EST sequence as a seed. Then a recursive algorithm was used to extend the seed EST into an extended assemblage, by pulling additional sequences from different databases
15 (*i.e.*, Hyseq's database containing EST sequences, dbEST version 115, gb pri 115, and UniGene version 103, and exons from public domain genomic sequences predicted by GenScan) that belong to this assemblage. The algorithm terminated when there was no additional sequences from the above databases that would extend the assemblage. Further, the inclusion of component sequences into the assemblage was based on a BLASTN hit to the extending assemblage with BLAST score
20 greater than 300 and percent identity greater than 95%.

The novel predicted polypeptides (including proteins) encoded by the novel polynucleotides (SEQ ID NO: 1-8051) of the present invention are incorporated in the attached Sequence Listing. A subset of the predicted polypeptide sequences contain an unknown amino acid; a stop codon; a possible nucleotide deletion; or a possible nucleotide insertion. These sequences have also been
25 shown in their entirety in Table 2. Table 2 also shows the corresponding start and stop nucleotide locations to each of SEQ ID NO: 1-8051. Table 2 also indicates the method by which the polypeptide was predicted. Method A refers to a polypeptide obtained by using a software program called FASTY (available from <http://fasta.bioch.virginia.edu>) which selects a polypeptide based on a comparison of the translated novel polynucleotide to known polynucleotides (W.R. Pearson, Methods in Enzymology, 183:63-98 (1990), herein incorporated by reference). Method B refers to
30 a polypeptide obtained by using a software program called GenScan for human/vertebrate sequences (available from Stanford University, Office of Technology Licensing) that predicts the polypeptide based on a probabilistic model of gene structure/compositional properties (C. Burge and S. Karlin, J. Mol. Biol., 268:78-94 (1997), incorporated herein by reference). Method C refers

to a polypeptide obtained by using a Hyseq proprietary software program that translates the novel polynucleotide and its complementary strand into six possible amino acid sequences (forward and reverse frames) and chooses the polypeptide with the longest open reading frame.

The nearest neighbor results for SEQ ID NO: 1-8051 were obtained by a BLASTX
5 version 2.0a1 19MP-WashU search against Genpept release 123 and Geneseq release 200110 (Derwent), using BLAST algorithm. The nearest neighbor result showed the closest homologue for SEQ ID NO: 1-8051. The nearest neighbor results for SEQ ID NO: 1-8051, having identifiable function(s) are incorporated in the attached Sequence Listing.

Using eMatrix software package (Stanford University, Stanford, CA) (Wu et al., J.
10 Comp. Biol., Vol. 6 pp. 219-235 (1999) herein incorporated by reference), all the polypeptide sequences were examined to determine whether they had identifiable signature regions. The attached Sequence Listing provides the results obtained by eMatrix analysis for each polypeptide as follows: the signature region found in the indicated polypeptide sequences, the description of the signature, the eMatrix p-value(s) and the position(s) of the signature within the polypeptide
15 sequence.

Using the pFam software program (Sonnhammer et al., Nucleic Acids Res., Vol. 26(1)
pp. 320-322 (1998) herein incorporated by reference) all the polypeptide sequences were examined for domains with homology to certain peptide domains. The attached Sequence Listing provides the results obtained by pFam analysis for each polypeptide, namely: the name of
20 the domain found, the description, the p-value and the pFam score for the identified domain within the sequence.

Tables 1 and 2 follow. Table 1 shows the various tissue sources of SEQ ID NO: 1-8051. Table 2 shows the start and stop nucleotides for the translated amino acid sequence for which each assemblage encodes. Table 2 also provides a correlation between the amino acid sequences set forth
25 in the Sequence Listing, the nucleotide sequences set forth in the Sequence Listing and the SEQ ID NO: in USSN 09/577,408.

TABLE 1

Tissue Origin	Tissue/ RNA Source	Library Name	SEQ ID NO:
adult brain	GIBCO	AB3001	53-57 119-121 205-206 229-232 311-314 318-320 328-331 340-341 360-361 382-383 398 400 433 444 448-449 455 461-465 467-468 476-479 488 501-504 506 508-513 522-526 533-535 541-542 559- 560 562 637-640 649 654-655 658 679-683 751-752 755 757-764 766 771 780-782 841-849 857 867-869 872-874 879 884-885 890 915-917 945 969 1006-1009 1031-1035 1101-1103 1110 1112 1115 1120-1121 1123 1131 1185-1190 1252 1299-1301 1303-1304 1314- 1316 1338 1355-1359 1361-1363 1382-1387 1395-1399 1447 1458- 1460 1473-1477 1479-1481 1484-1485 1489-1493 1495-1496 1498 1515 1517 1534-1535 1565-1566 1601 1603 1612 1614-1619 1621- 1622 1626 1642-1644 1646 1679 1690-1693 1695-1696 1698-1704 1706-1715 1717-1718 1726 1728-1737 1739-1748 1751-1760 1762- 1763 1768-1771 1782 1843 1847 1862-1863 1877-1880 1882-1886 1895-1901 1904-1905 1922 1976-1991 2023 2034 2171-2174 2182- 2184 2200-2203 2220-2223 2232-2233 2250 2332-2339 2347-2350 2352-2356 2359-2361 2371-2372 2375 2380 2383-2384 2386-2388 2466-2469 2485-2489 2533 2547-2550 2575 2585-2586 2588-2589 2602 2682-2686 2688 2714-2715 2737 2739-2741 2744-2745 2789- 2791 2798-2802 2839-2841 2899 2910-2918 2920-2922 2924 2952- 2955 3043-3050 3095-3096 3101-3102 3104-3105 3109-3110 3116- 3117 3134-3135 3179-3180 3223-3224 3236-3237 3260-3261 3265 3271-3272 3280-3282 3311 3325 3349-3350 3354 3393-3395 3397- 3400 3491-3493 3499-3503 3517-3519 3521-3523 3560 3581-3582 3588-3589 3592-3596 3617-3619 3631 3683 3696 3698-3702 3762- 3763 3801 3805 3834-3835 3837-3838 3850-3855 3866 3944 3955 3967 3979-3985 3990 4017-4020 4081 4098 4100-4103 4126-4127 4189-4190 4193 4226 4266-4269 4271-4272 4298-4301 4303 4320- 4323 4325 4341 4344-4345 4347-4349 4427-4428 4436 4454 4537- 4541 4543 4549-4550 4552-4554 4564-4567 4576 4580-4591 4599 4610 4698 4710 4806-4808 4810 4812 4833 4847-4853 4884-4885 4910 4940-4941 4943-4944 4952 4954-4958 4972 5033-5038 5040- 5044 5056-5060 5062 5105 5116 5137 5141 5158-5161 5163 5166- 5167 5226-5227 5229-5233 5236-5238 5240-5249 5252-5261 5263- 5267 5272 5274 5340-5341 5478-5480 5525 5546-5547 5566-5570 5581 5628-5634 5644 5760 5771 5782 5872 5881-5887 5904 5911 5971-5976 6003 6007 6037-6038 6074 6124-6128 6189 6191-6194 6198 6231-6233 6249-6250 6339-6340 6360 6413-6414 6553-6556 6586-6587 6656 6681 6722-6727 6729-6736 6771 6782 6794 6805 6903 6906 6939-6942 7044-7051 7053 7055-7056 7087-7089 7116 7131 7254-7255 7294 7340 7377-7379 7662 7677 7686 7697 7730 7732-7734 7741 7744-7760 7763 7775 7808-7810 7835-7836 7847 7942 8025
adult brain	GIBCO	ABD003	4-5 28-29 44 47 205-206 211-212 229-232 246-248 250-259 261- 266 282-284 318-320 323-328 338-341 349-354 356-359 368-375 382-383 385-386 397-398 400 404-409 426-427 433 444-449 455 476-479 486-489 492-493 495-497 500-504 506 508-515 517 522- 526 528-529 555-556 584-592 602-604 606-614 616 622 624 627- 633 635-640 649 658 666 668 672-676 679-683 686-688 690-692 704-707 722-723 726 768-769 771 782 841-843 846-849 857 867- 869 872-874 876-881 884-885 890 893-895 900 902 911-917 919- 921 923-927 929 945 960-962 969 973 979-985 991-993 995-1000 1006-1009 1020 1031-1035 1037-1040 1042-1043 1056-1057 1063 1070-1072 1083 1086-1094 1100-1109 1111 1113 1115 1119-1123 1129 1131 1137-1148 1165 1174-1175 1183 1185-1197 1204 1210- 1212 1221-1225 1227-1232 1236-1237 1241-1242 1250 1253 1264- 1265 1267-1270 1272 1279-1281 1286 1291-1293 1303-1306 1308- 1309 1314-1316 1334-1336 1338-1344 1355-1359 1361-1363 1365- 1368 1370 1372-1375 1382-1390 1392-1400 1411-1413 1423 1438- 1439 1442-1445 1447-1449 1451-1456 1476-1477 1484-1485 1489- 1493 1495-1496 1500 1503-1504 1506-1507 1515 1523-1524 1534- 1536 1538 1549 1560 1564-1571 1576-1578 1595-1601 1603 1610 1621-1622 1626 1640-1641 1644 1646 1648-1652 1674 1676-1680 1691-1693 1695-1696 1698-1700 1703-1704 1706 1711-1713 1718 1732-1736 1741-1745 1747-1748 1751-1754 1764 1768-1779 1781- 1790 1792-1805 1807-1819 1821-1826 1828-1837 1839-1844 1850

Tissue Origin	Tissue/ RNA Source	Library Name	SEQ ID NO:
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adult brain	Clontech	ABR001	27 39-42 53 136-143 145-154 156-163 282-284 297-298 338-339 374 408-409 411-420 422 436-441 476 478-479 528-529 552-554 666 668 703-706 754 773 784 795 806 840-843 859-862 915-917 919-921 929 999-1000 1037-1040 1042-1043 1104-1109 1131 1165 1198-1201 1291-1293 1303-1306 1308-1309 1334-1336 1339-1340

Tissue Origin	Tissue/ RNA Source	Library Name	SEQ ID NO:
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adult brain	Clontech	ABR006	55 122 126-130 136-154 156-163 168-169 178-180 194-195 340-341 360-361 368-373 431 434-435 457-459 476 478-479 495-497 528- 529 584-592 607-612 622 624 649-655 658 674-676 757-764 766 780-781 823-825 867 869 878 880-881 884-885 969 999-1000 1006- 1009 1073-1080 1167-1172 1191 1338 1341-1344 1370 1372-1373 1382-1384 1420 1438-1439 1442-1445 1470-1471 1486-1493 1495- 1496 1503-1504 1506-1507 1543-1547 1596-1600 1615-1619 1621- 1622 1628-1633 1635 1644 1646 1648-1652 1667-1670 1690 1718- 1732-1736 1747-1748 1751-1754 1768-1772 1774 1862-1863 1938- 1945 1965-1967 2001 2012 2014-2015 2039-2040 2063 2084 2097 2099-2100 2114-2117 2141 2146 2157 2162-2163 2168 2179 2185- 2187 2196 2200 2206 2217 2228 2234-2242 2244 2253 2265 2285- 2286 2332-2339 2352-2356 2359-2361 2380 2387-2388 2412-2417 2419-2423 2425-2427 2495 2533 2575 2625-2626 2628 2683-2686 2688 2764 2767-2768 2792-2793 2798-2804 2839-2841 2900-2908 2934-2937 2955 3052 3065 3087-3091 3093 3095 3107 3127-3132 3143 3151-3155 3216 3236-3237 3342 3350 3352 3385 3396 3411 3458-3459 3521-3523 3588-3589 3627 3719 3749 3772 3791-3794 3890 3909-3910 3912 3974 3996 4017-4020 4064 4091-4097 4104- 4105 4183-4185 4306-4307 4341 4404-4405 4518-4519 4521 4529 4533-4536 4582-4585 4688-4689 4748 4847-4853 4952 4954-4958 5010-5013 5090-5093 5095 5123 5131-5132 5142-5143 5193-5194 5196 5277-5281 5316 5409 5664 5764-5770 5772-5781 5783-5785 5933 6175 6181-6182 6300-6303 6311-6313 6424-6427 6493 6624- 6625 6658-6660 6662-6666 6735 6871 6882 6888-6889 6899-6900 6939-6942 7063 7397 7493-7494 7504 7515 7526 7535 7546 7558 7569 7587-7589 7616 7677 7686 7697 7725-7726
adult brain	Clontech	ABR008	2 16-17 19 21 45 47 55 58-59 61-66 77-87 89-98 100-110 112-117 122 126-132 134 136-154 156-165 168-169 192-195 208 211-213 221 237-239 249 260 265-266 269 280 282-284 297-298 321 323- 325 328 335-337 340-341 360-361 368-374 382-383 387 389-398 400 404-409 423 428-430 432 436-441 448-449 457-459 476 478- 482 495-497 500 527-529 536-540 550 552-554 567-571 573-580 586-592 602 607-614 616 622 624 627-633 635-640 645 649 654- 655 663-664 666 668 682-683 685-688 690-691 704-707 710-719 721-725 744-745 751-753 755 757-764 766 773 780-781 784 795 806 816 818 823-827 841-849 856 859-862 864-866 872-874 880- 881 883-885 896-900 902 915-917 919-921 929 931 945-948 954 962-965 967-968 979 988 994 999-1000 1006-1009 1015-1017 1031-1035 1037-1040 1042-1043 1054-1055 1073-1080 1101-1110 1112 1119-1121 1123 1152 1155-1160 1163 1167-1172 1174-1175 1177-1179 1181 1192-1193 1195-1196 1198-1201 1210 1221-1227 1231-1232 1236-1237 1241-1249 1251 1266 1273-1275 1279-1281 1283 1287 1289 1299-1301 1305-1309 1328-1331 1334-1338 1341- 1344 1381 1388-1390 1392-1400 1416-1418 1420 1423 1428 1430 1432-1440 1442-1445 1447 1450 1461-1465 1472 1486-1493 1495- 1496 1499-1500 1510-1513 1520 1543-1549 1559-1561 1596-1601 1603-1606 1611-1612 1614-1619 1628-1633 1635 1640-1643 1648- 1654 1657-1663 1671-1672 1686-1693 1695-1696 1698-1699 1703- 1704 1706 1710-1713 1718-1725 1730-1736 1738 1747-1760 1762

Tissue Origin	Tissue/ RNA Source	Library Name	SEQ ID NO:
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Tissue Origin	Tissue/ RNA Source	Library Name	SEQ ID NO:
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adult brain	BioChain	ABR012	28-29 432-433 444 455 476 478-479 483 486-487 489 538 618-620 645 753 856 954 979 1299-1301 1654 1703-1704 1706 1732-1736 1749 1849 2016-2022 2347-2349 2425-2427 2898 2909 3212 3222 3233 4952 4954-4958 4978-4980 5645-5648 7771-7772
adult brain	BioChain	ABR013	476 478-482 486-487 489 1133-1135 1305-1306 1308-1309 1701-1702 2024-2026 2347-2349 2425-2427 2621-2624 2682-2686 2688 2898 2909 3056-3063 3134-3135 3743 3772 4952 4954-4958 5272 5274 6545-6546 7771-7772
adult brain	Invitrogen	ABR014	1694 1697 1703-1704 1706 1775-1777 1862-1863 1910 2135-2137 2200-2203 2216 2218 2528 2539 2545 2556 2567 2822 3055 3101-3102 3104-3105 3116-3117 3506 3885-3886 3979-3985 4702 5176 5272 5274 6353 6356-6358 6413-6414 6419 6424-6427 6824-6826 6828-6829 7044 7186 7197
adult brain	Invitrogen	ABR015	202-203 1534-1536 1538 1644 1646 1648-1652 1718 1741-1745 1782 1843 2084 2136 2232-2233 2838 2952-2954 2962-2971 3349 3916-3921 3923-3932 3934-3936 4571-4574 4587 4590-4591 4599 4610 4698 4710 4737-4739 5176 5272 5274 5654-5656 6191 6198 6903 6906 7822-7823
adult brain	Invitrogen	ABR016	28-29 56 1534-1536 1538 1612 1614 1642-1643 1755-1760 1762 1946 1948-1951 2010-2011 2013 2016-2022 2137 2204-2205 2207-2208 2835 2837 2853-2854 2857-2858 2955 3039-3040 3071-3077 3463 3853-3854 3990 4554 4565 4576 4737-4739 5272 5274 5298 6195-6196 6353 6356-6358 6424-6427 6761 6851-6854
adult brain	Invitrogen	ABT004	55 66 77 126-130 144 168-169 201 237-239 265-266 326-327 360-361 368-373 382-383 466 480-482 486-487 489 500 528-529 536-537 540 567-570 593 595-596 607-614 616 654-655 666 668 682-683 744-745 773 782 784 795 806 823-825 846-849 872-874 911-912 919-921 945-948 969 979 999-1000 1073-1080 1119 1152 1163 1177-1179 1198-1201 1221-1225 1227 1299-1301 1326 1338-1340 1346-1348 1350-1359 1361-1363 1369 1374-1375 1381 1388-1390 1438-1439 1442-1445 1462-1465 1484-1493 1495-1496 1529-1535 1572-1575 1587-1588 1601 1603 1615-1619 1628-1633 1635 1640-1641 1686-1689 1691-1693 1695-1696 1700 1703-1704 1706-1709 1718 1747-1748 1751-1760 1762 1790 1792-1795 1806 1823-1824 1862-1865 1887 1895-1901 1904-1905 1914 1925 1930-1935 1974 2002-2008 2087 2097 2099-2100 2114-2117 2185-2186 2250 2276 2289-2294 2328 2330 2332-2339 2347-2350 2374 2383-2386 2396 2407 2418 2425-2427 2429 2437 2448 2459 2466-2470 2482 2500-2502 2528 2539 2545 2556 2567 2572-2574 2590-2594 2679-2681 2706-2707 2718-2721 2723-2725 2750-2753 2764 2766-2768 2777 2784 2803-2804 2849-2850 2853-2855 2857-2858 2900-2908 2919 2936-2937 2955 2962-2971 2989-2990 2992-2993 3003-3008 3070-3072 3101-3102 3104-3105 3107 3112-3113 3115 3118-3119 3121 3151-3158 3195-3196 3209-3211 3213-3215 3223-3224 3260-3261 3278-3279 3310 3322 3356-3357 3389 3436-3437 3449-3450 3452 3511 3581-3582 3584 3620-3622 3732 3741-3742 3745 3772-3773 3775 3782 3791-3794 3806-3807 3809-3810 3813 3839 3856-3859 3861-3865 3867-3871 3881 3888 3958-3964 4009 4024-4025 4087 4089-4090 4114-4120 4128 4183-4185 4193 4218 4220 4227 4233 4309-4311 4373-4374 4377 4415 4433 4443 4486 4491-4493 4531 4537-4539 4542 4551 4622-4624 4671-4672 4753 4755-4756 4765 4774-4776 4787 4798 4809 4821 4832 4838-4841 4843 4845 4847-4854 4861-4869 4872-4880 4884-4885 4905 4917-4918 4921-4926 4940-4941 4943-4944 4952 4954-4958 4964 4969-4971 4975 4995 5010-5013 5056-5060 5062 5082 5125-5126 5128-5130 5168-5169 5216 5218-5221 5272 5274 5307 5333-5335 5400 5537 5539 5579 5599-5603 5678-5680 5747-5748 5928 5979 5981-5982 6022 6025-6032 6043-6045 6047-6048 6104-6106 6112 6143-6145 6148-6152 6178 6197 6249-6250 6333-6335 6450-6451 6453 6455-6456 6604 6627 6629 6639 6650 6656 6687-6688 6693 6709 6711-6712 6733-

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cultured preadipocytes	Stratagene	ADP001	25 28-29 36 40-42 123-124 168-169 178-179 229-233 237-239 265-266 315-320 323-325 352-354 356-359 382-383 423 432-433 444 448-449 455 476 478-479 483 500 518-521 525-526 538 552-554 603-604 606-612 637-640 645 649 654-655 658 666 668 708 730 744-745 753 780-781 833-835 841-845 856 884-885 923-927 949-950 954 969 987 1015-1017 1019 1024-1028 1156-1160 1165 1181 1192-1193 1195-1196 1236-1237 1264-1265 1273-1275 1299-1301 1305-1306 1308-1309 1322 1355-1359 1361-1363 1374-1375 1424-1426 1534-1535 1552-1558 1572-1575 1621-1622 1628-1633 1635 1654 1657-1663 1686-1689 1701-1704 1706 1749 1775-1777 1782 1790 1792-1794 1796-1797 1832-1834 1836-1837 1839-1843 1845 1849 1867 1874-1876 1922 1935 2081-2083 2085-2086 2088-2091 2105-2108 2124-2127 2171-2174 2181 2204-2205 2207-2208 2216 2218 2220-2223 2234-2238 2240-2242 2284 2328 2330 2345-2346 2352-2356 2359-2361 2381-2382 2401-2406 2408-2410 2425-2427 2498-2499 2503 2505-2506 2533 2544 2546 2576-2577 2584-2586 2588-2589 2602 2632-2634 2682 2699-2704 2706-2708 2750-2753 2764 2767-2770 2787 2792 2798-2802 2830-2833 2849-2850 2898 2909 3039-3040 3043-3050 3081 3092 3101-3105 3111 3114 3133 3209-3211 3213-3215 3223-3224 3249-3250 3289-3295 3297 3356-3357 3499-3501 3506 3560 3575-3576 3579-3580 3697 3708 3713-3714 3717-3718 3720-3722 3732 3749 3782 3788-3790 3796 3802 3916-3921 3923-3932 3934-3936 4002 4083-4085 4087 4089-4097 4138-4142 4144-4146 4172-4173 4176 4256-4258 4320-4323 4325 4357 4368 4373-4374 4379 4537-4539 4571-4574 4582-4585 4633-4642 4644-4649 4671-4672 4705 4728-4729 4753 4755-4756 4837 4842 4844 4884-4886 4888 4910 5087 5137 5141 5182-5183 5185-5187 5265-5266 5277-5281 5319-5322 5468-5469 5566-5569 5591-5593 5595-5596 5638 5644-5648 5654-5656 5694 5705 5747-5748 5910 5918-5919 5934-5935 5937-5938 5961 6022 6025-6029 6055-6056 6058-6060 6069 6088 6183 6201 6209-6211 6242-6243 6283 6339-6340 6361-6362 6440 6442 6517-6518 6521-6529 6553-6554 6627 6629 6658-6660 6662-6666 6747-6749 7162 7185 7187 7238 7291-7293 7321-7322 7362-7363 7365 7377-7379 7393-7395 7427 7551-7553 7613-7614 7644 7655 7808-7810 7984-7986 7988-7990
adrenal gland	Clontech	ADR002	9-11 15 53 55 66 77 123-124 205-206 229-233 265-266 282-284 318-320 323-325 368-373 432-433 444 455 476 478-479 483 495-497 501-504 506 508-513 518-521 533-535 538 547-549 551-554 574-582 597-600 602-604 606-614 616 645 658-662 666 668 672-673 684-688 690-691 704-706 726-728 746 753 780-783 816-818 823-825 833-835 856 872-874 876-877 900 902 911-913 923-927 954 959 970 973-976 978 991-993 995-997 1006-1009 1015-1017 1031-1035 1037-1040 1042-1043 1056-1057 1063 1072 1083 1089 1100-1103 1111 1115-1118 1120-1123 1129-1130 1140 1146-1148 1165 1173 1176-1179 1185-1190 1197 1202-1203 1205-1207 1210 1213-1214 1216-1218 1231-1232 1258 1261 1264-1265 1287 1289 1299-1301 1305-1306 1308-1313 1323-1325 1328-1331 1339-1340 1355-1359 1361-1363 1385-1387 1400 1408 1420 1448-1449 1451-1456 1476-1481 1498 1521-1522 1534-1535 1543-1547 1559 1561-1562 1565-1566 1604-1606 1611 1626 1640-1641 1654-1655 1674 1676-1678 1681-1684 1701-1706 1716 1727 1730-1731 1737 1739-1740 1749 1807 1825-1826 1828-1831 1836-1837 1839-1843 1845 1849-1850 1852-1855 1858-1865 1870 1877-1880 1882-1886 1895-1901 1904-1905 1975 2002-2008 2010-2011 2013 2024-2033 2035-2036 2038-2040 2063 2081-2083 2105 2118-2123 2128-2129 2131-2134 2144 2147-2152 2162-2163 2204-2205 2207-2208 2216 2218 2284 2289-2294 2319 2332-2339 2341-2344 2347-2350 2359-2361 2387-2388 2391-2394 2425-2428 2430-2434 2450-2451 2464-2465 2494-2495 2549-2552 2585-2586 2588-2589 2629-2631 2646-2654 2656-2663 2674-2676 2679-2681 2695-2697 2699-2704 2708 2714-2715 2730-2733 2750-2753 2764 2767-2768 2774-2776 2787 2798-2804 2835 2837 2842-2843 2898 2900-2909 2936-2937 2978-2979

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adult heart	GIBCO	AHR001 7 9-11 28-29 39 47 55 60-68 77-87 89-98 100-109 112-117 123-124 164-165 178-179 205-206 210 215-217 223-232 237-239 246-248 250-259 261-268 270-273 282-284 311-320 328-332 334-341 344 349-359 366 368-375 377 385-400 404-409 426-430 432 436-443 448-454 456 461-465 467-468 476-479 483 486-489 495-497 500- 504 506 508-515 517-521 525-526 528-529 538 545-546 552-556 567-571 573-580 586-593 595-596 602-604 606-612 618-620 627- 633 635-640 645 649 658 663-664 666 668-669 682-684 686-691 700 704-706 709 720 722-723 731-745 753 768 771 773 780-782 784 795 806 816 818 837 840-845 851 856-857 859-869 878-900 902-909 911-912 914 919-921 923-927 929 937 954 959 962-965 967-969 973 979 987 999-1000 1005-1009 1015-1021 1030-1035 1041 1044-1046 1052-1061 1063 1068-1072 1083 1087-1094 1100- 1103 1110-1112 1115 1119-1125 1127-1129 1131 1137-1148 1161- 1162 1164-1165 1174-1175 1177-1179 1185-1193 1195-1196 1202- 1203 1205-1212 1228-1232 1236-1239 1246 1262-1269 1273-1275 1279-1281 1283-1285 1291-1293 1299-1301 1303-1306 1308-1309 1314-1317 1319 1334-1336 1341-1344 1346-1348 1350-1359 1361- 1363 1369 1371 1376 1380 1382-1384 1388-1391 1395-1400 1402 1410-1413 1416-1418 1438-1439 1442-1445 1447-1449 1451-1456 1462-1465 1470-1471 1476-1477 1486-1488 1498 1503-1504 1506- 1507 1510-1515 1517 1523-1524 1529-1533 1536 1538 1541-1542 1559 1561 1567-1569 1571 1576-1578 1595-1601 1603-1606 1611- 1612 1614-1619 1623 1627-1633 1635 1638-1643 1647-1652 1655 1671-1672 1686-1693 1695-1696 1698-1699 1703-1704 1706 1711- 1713 1719-1725 1730-1731 1737 1739-1740 1755-1760 1762 1765- 1771 1773 1775-1777 1782-1789 1796-1797 1807 1823-1824 1843 1845 1862-1863 1866-1867 1874-1876 1887-1890 1895-1901 1903- 1905 1907-1909 1915-1918 1921-1922 1936 1938-1945 1947 1976 2010-2011 2013-2022 2024-2033 2035-2036 2039-2041 2052 2081- 2083 2105-2108 2113-2117 2124-2127 2136-2137 2143 2153-2156 2158-2159 2161 2164-2166 2169-2174 2177-2178 2180 2188-2195 2197-2200 2204-2205 2207-2208 2216 2218 2220-2223 2225-2227 2229-2238 2240-2242 2246 2284 2287 2289-2294 2328 2330-2339 2345-2350 2352-2356 2359-2361 2369-2372 2374-2375 2380-2382 2385 2389-2390 2395-2410 2412-2423 2425-2434 2436-2438 2448 2450-2459 2464-2475 2480 2482-2484 2492 2495-2503 2505-2506 2508-2509 2511-2516 2518-2527 2529-2531 2533 2544 2546 2549- 2550 2558-2562 2564-2565 2569-2575 2584-2586 2588-2589 2602 2612 2629-2634 2639-2640 2664-2665 2667 2674-2676 2678 2682-

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adult kidney	GIBCO	AKD001	9-11 13 15-17 25 27-29 36 40-42 47 55 60 66 69-73 77 80-109 111- 117 122-124 126-130 133 178-179 184-187 189-190 205-206 223- 232 237-239 246-248 250-259 261-267 282-284 297-298 318-320 323-331 335-337 340-341 344 352-361 365-367 374-375 377 382-

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adult kidney	Invitrogen	AKT002	18 44 69-72 80-87 89-98 100-109 112-117 123-124 133 168-169 265-266 268 270-273 318-320 323-325 328 335-337 340-341 385- 387 389-397 426-427 431 434-435 450-454 456 486-487 489 501- 504 506 514-515 517 584-593 595-596 602 607-614 616-620 627- 633 635-640 654-655 663-664 670-671 679-681 722-723 747 780- 781 823-825 844-845 876-877 883-885 900 902 915-917 949-950 959 963-965 967-970 979 1006-1009 1019 1024-1028 1056-1057 1087-1088 1090-1094 1101-1103 1115-1121 1123 1127-1128 1165 1192-1193 1195-1196 1202-1203 1205-1207 1211-1214 1216-1218 1228-1230 1241-1242 1257 1269 1294-1295 1297-1301 1303-1304 1314-1316 1323-1325 1341-1344 1355-1359 1361-1363 1388-1390 1405-1406 1424-1426 1438-1439 1442-1445 1447 1450 1461 1472 1498 1503-1504 1506-1507 1521-1522 1529-1533 1536 1538 1543- 1547 1562 1565-1566 1576-1579 1581-1582 1625 1648-1652 1657- 1663 1690-1693 1695-1696 1703-1704 1706 1711-1713 1746 1765- 1767 1773 1775-1777 1783-1790 1792-1794 1806 1825-1826 1828- 1831 1843 1845 1866-1869 1895-1901 1904-1905 1915-1918 1922 1938-1945 1952-1957 1960-1961 1963 1976-1978 1980-1989 1991 2010-2011 2013 2016-2023 2027-2036 2039-2041 2052 2106-2108

Tissue Origin	Tissue/ RNA Source	Library Name	SEQ ID NO:
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adult lung	GIBCO	ALG001	19 28-29 44 74-76 78-79 123-124 178-179 205-206 229-232 246- 248 250-259 261-264 282-284 318-320 344 355 366 368-374 377 385-386 388 397-400 404-407 426-427 433 444 448-456 466 476- 479 484-485 488 492-493 500 508-515 517-526 541-542 545-546 552-554 593 595-596 602-604 606 658 704-707 744-745 769 782 836 844-845 851 859-862 876-877 880-881 892 900 902 911-912 914 923-927 930 935-936 938 969-970 973 999-1000 1006-1009 1024-1028 1058-1061 1063 1068-1069 1072 1083 1089 1096-1103 1111 1113 1115-1118 1122 1124-1126 1129 1140 1146-1148 1156- 1160 1165 1174-1175 1185-1190 1221-1225 1227 1267-1268 1282 1299-1301 1303-1304 1317 1319 1323-1325 1341-1348 1350-1354 1371 1380 1391 1402 1410-1413 1424-1426 1438-1439 1442-1446 1489-1493 1495-1496 1503-1504 1506-1507 1541-1542 1612 1614- 1619 1644 1646 1648-1652 1681-1684 1690 1698-1699 1703-1704 1706 1711-1713 1730-1731 1747-1748 1751-1754 1775-1777 1782- 1789 1799-1804 1836-1837 1839-1842 1858-1860 1871-1876 1887 1904-1905 1911-1913 1922 1946 1948-1951 1977-1978 1980-1989 1991 1996-2000 2010-2011 2013 2016-2022 2039-2040 2081-2083 2102 2105 2124-2127 2136 2143 2181 2185-2186 2188-2195 2197- 2199 2204-2205 2207-2208 2216 2218 2225-2227 2229 2332-2339 2345-2350 2359-2361 2387-2388 2425-2428 2430-2432 2439-2444 2455-2458 2496-2502 2510 2517 2528 2533 2539 2545 2556 2563 2567 2575 2579-2583 2595-2597 2599-2601 2629-2631 2679-2682 2690-2693 2699-2704 2714-2715 2744-2745 2763 2766 2787 2789- 2791 2803-2804 2806-2807 2813-2820 2838 2915-2917 2922 2924 2943-2944 3011-3012 3014 3018-3019 3043-3050 3078-3080 3082- 3091 3093 3095 3127-3132 3183 3192 3212 3218 3222-3224 3226 3233-3235 3355 3436-3438 3463 3499-3501 3506 3521-3523 3560 3563-3564 3581-3582 3592-3596 3610-3612 3615-3616 3626 3631 3679 3691 3696 3698-3702 3713-3714 3732 3745 3762 3764-3765 3788-3790 3805 3832-3833 3855 3892 3903 3911 3922 3937-3940

Tissue Origin	Tissue/ RNA Source	Library Name	SEQ ID NO:
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lymph node	Clontech	ALN001	20-21 28-29 34-35 37 40-42 80-87 89-98 100-109 112-117 282-284 335-337 349-351 365 367 387 389-396 432 448-454 456 476-479 488 500-504 506 518-524 536-538 540 552-554 603-604 606 618-620 645 649 747 753 769 846-849 856 923-927 939-943 954 973 979 999-1000 1019 1021 1029-1030 1041 1052 1056-1057 1063 1070-1072 1083 1089 1100 1111 1115-1118 1122 1124-1125 1129 1131 1133-1135 1140 1167-1172 1310-1313 1427 1447 1473-1475 1498 1576-1578 1595 1604-1606 1648-1652 1680 1768-1771 1775-1777 1782 1843 1845 1850 1861 1870 1887 1935 2137 2143 2162-2163 2200 2216 2218 2232-2233 2289-2294 2319 2322-2327 2345-2346 2350 2352-2356 2359-2361 2363-2365 2387-2388 2425-2427 2449 2466-2469 2490-2491 2563 2575 2590-2594 2607-2611 2632-2634 2682 2694 2744-2745 2750-2753 2763 2787 2795 2803-2804 2856 2865 2876 2910-2914 2955 2977 2982-2987 3010 3020-3022 3039-3040 3043-3050 3095 3116-3117 3127-3132 3218-3219 3260-3264 3311 3412-3415 3417 3419 3439 3499-3501 3521-3523 3575-3576 3579-3580 3592-3596 3600 3677 3679 3713-3714 3717-3718 3720-3722 3760 3769 3774 3776 3786 3797 3799 3913-3915 3937-3940 3944 3955 3967 4102-4103 4106-4108 4114-4120 4250-4258 4316 4357 4368 4379 4411 4436 4478 4575 4577-4579 4587 4599 4610 4616-4617 4633-4642 4644-4649 4677-4679 4688-4689 4745 4870-4871 4904 4978-4980 5020 5075-5076 5078-5081 5105 5107-5120 5224 5265-5266 5292-5294 5312-5313 5356 5486-5489 5531-5533 5563 5573 5594 5605 5616 5627 5645-5648 5653-5656 5667-5671 5841-5845 5875-5878 5962-5963 5987-5988 6005-6007 6022 6025-6029 6073 6104-6106 6148-6152 6179 6260-6265 6267-6274 6283-6285 6399 6410 6508 6553-6554 6615 6619-6621 6679 6778 6780-6781 6803 6920-6921 6984-6987 6998 7069-7070 7098-7107 7109 7231 7241 7252 7257-7258 7270 7314-7316 7356 7377-7379 7453-7460 7508 7587-7589 7688 7708 7719 7801-7803 7820 7839 7895-7897 7969-7973 8044-8046
young liver	GIBCO	ALV001	16-17 28-29 118-121 192-193 223-232 268 270-273 282-284 295-301 318-320 326-328 335-337 352-354 356-359 368-374 376 378-381 387 389-397 431 433-435 444 455 477 488 492-493 501-504 506 508-515 517 536-537 540 547-549 551-554 557-558 574-580 586-593 595-596 602 613-614 616 627-629 637-644 650-655 666 668 689 700 708-709 720 722-723 731 742 782 844-845 851 863 872-874 884-885 893-895 900 902 923-927 945 969 973 1006-1009 1037-1040 1042-1043 1101-1103 1110 1112 1115 1124-1125 1136 1165 1177-1179 1191 1213-1214 1216-1218 1226 1228-1230 1236-1237 1246 1264-1265 1267-1268 1279-1281 1294-1295 1297-1301 1339-1340 1346-1348 1350-1359 1361-1363 1365-1369 1374-1375 1416-1418 1424-1426 1447 1450 1458-1461 1472 1476-1477 1486-1493 1495-1496 1498 1514 1523-1524 1570 1589-1590 1592-1594 1601 1603 1612 1614-1619 1640-1643 1690 1698-1699 1703-1704 1706 1715 1717-1718 1782-1789 1798 1809 1823-1824 1845-1846 1862-1863 1867 1874-1876 1881 1891-1901 1907-1909 1935 1938-1940 1992-1995 2039-2040 2105 2114-2118 2120-2127 2143 2177-

Tissue Origin	Tissue/ RNA Source	Library Name	SEQ ID NO:
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adult liver	Invitrogen	ALV002	68 73 192-193 198 200 211-212 234 265-266 268 270-273 282-284 295-301 326-327 335-337 376 378-381 423 477 480-482 486-489 495-497 536-537 540 557-558 586-592 613-614 616 627-633 635- 636 641-644 650-655 674-676 679-681 707-708 724-725 729 757- 764 766 771 782 823-825 840 844-845 872-874 913 915-917 951- 953 956 969 991-993 995-997 1019 1054-1055 1087-1088 1090- 1094 1116-1119 1124-1125 1146-1148 1165 1177-1179 1191 1202- 1203 1205-1207 1213-1214 1216-1218 1243-1245 1250 1253 1257 1270 1272 1279-1281 1287 1289 1299-1301 1314-1316 1339-1340 1355-1359 1361-1363 1376-1379 1409 1423 1458-1460 1479-1481 1499 1514 1529-1533 1549 1560 1563 1589-1590 1592-1594 1601 1603 1625 1628-1633 1635 1638-1639 1642-1643 1648-1652 1657- 1663 1681-1684 1690-1693 1695-1696 1698-1699 1703-1704 1706 1730-1731 1737 1739-1740 1747-1748 1751-1754 1790 1792-1794 1825-1826 1828-1831 1845 1858-1860 1867 1874-1876 1941-1946 1948-1951 2098 2110-2112 2137 2139-2140 2142 2147-2152 2171- 2174 2177-2178 2180 2188-2195 2197-2199 2220-2224 2234-2238 2240-2242 2284-2286 2319 2345-2346 2380 2466-2469 2515-2516 2518-2527 2533 2564-2565 2629-2631 2638 2682 2690-2693 2710 2712 2716-2721 2723-2725 2730-2733 2750-2753 2769-2770 2777 2784 2795 2814-2820 2849-2850 2856 2859-2860 2865 2876 2921 3016-3017 3073-3077 3081 3092 3096 3103 3114 3151-3155 3244 3256 3267 3274 3285 3296 3331 3358-3361 3364-3373 3375-3384 3386-3388 3433-3434 3499-3501 3560 3562 3584 3587 3590-3591 3620-3622 3624 3635 3646 3676 3760 3769 3776 3786 3797 3825- 3827 3829 3956 3996 4024-4025 4075-4076 4078-4080 4082 4091- 4097 4104-4105 4150-4153 4244-4245 4264 4290 4292-4294 4311 4326-4328 4336-4340 4357 4368 4379 4436 4486 4494-4497 4499- 4500 4537-4539 4560-4561 4618-4619 4671-4672 4707 4737-4739 4753 4755-4756 4777 4817 4827-4831 4842 4844 4847-4853 4872- 4873 4905 4917-4918 4921-4926 4952 4954-4958 4990-4994 5105 5116 5125-5126 5128-5130 5144-5146 5173 5184 5189-5190 5195 5206 5209 5212-5215 5270-5271 5308-5311 5423 5476-5477 5486- 5489 5523 5525 5540-5541 5581 5591-5593 5595-5596 5654-5659 5661-5663 5760 5771 5782 5818-5820 5833-5834 5908-5909 5913 5934-5935 5937-5938 6030-6032 6088 6131-6132 6143-6144 6148-

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adult liver	Clontech	ALV003	55 299-301 641-644 649-653 872-874 1941-1945 2136 2285-2286 2641-2642 3171-3172 3468-3469 4063 4067-4068 4104-4105 5233 7186 7197 7808-7810 7849
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Tissue Origin	Tissue/ RNA Source	Library Name	SEQ ID NO:
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placenta	Invitrogen	APL002	40-42 45 136-143 145-154 156-163 223-228 265-266 382-383 423 426-427 436-443 518-521 541-542 617 627-629 649 658 757-764 766 872-874 887-889 891 905-909 969 973 999-1000 1024-1028 1054-1055 1116-1118 1146-1148 1174-1175 1213-1214 1216-1218 1257 1305-1306 1308-1309 1374-1375 1405-1406 1423 1428 1430 1473-1477 1500 1510-1513 1528-1533 1640-1641 1665-1666 1680 1686-1689 1718 1782 1790 1792-1794 1938-1940 1962-1969 1971- 1974 1992-1995 2002-2008 2027-2033 2035-2036 2063 2098 2136- 2137 2147-2152 2162-2163 2181 2188-2195 2197-2199 2347-2349 2389-2390 2425-2427 2435 2500-2502 2572-2574 2674-2676 2682 2699-2704 2766 2772 2956-2960 3026-3034 3036-3038 3052 3101- 3102 3104-3105 3151-3155 3195-3196 3278-3279 3433-3434 3448- 3450 3452 3615-3616 3796 3937-3940 3944 3955 3967 3972-3973 4016 4024-4025 4064 4150-4153 4181 4287-4288 4326-4328 4415 4459 4490 4537-4539 4571-4574 4723-4729 4734-4735 4765 4776 4787 4798 4809 4821 4832 4843 4847-4854 4865 4874-4880 4884- 4885 4940-4941 4943-4944 5020 5045-5049 5073-5074 5125-5126 5128-5130 5197-5202 5204-5205 5207-5208 5212-5215 5314-5315 5340-5341 5401-5404 5406-5407 5675-5677 5928 6137-6142 6148- 6152 6333-6340 6399 6410 6545-6546 6819-6826 6828-6829 6903 6906 7054 7065 7081-7082 7348 7677 7686 7697 7730 7741 7752 7795-7796 7816-7817 7819 8030 8032
adult spleen	GIBCO	ASP001	7 9-11 13 28-29 49-51 55 118 123-124 164-165 167 178-179 213 237-239 246-248 250-259 261-266 268 270-273 282-284 318-320 323-328 338-339 344 355 365-367 374 377 385-386 388 397-400 411-420 422 431 433-441 444-447 455 460 476-479 484-485 488 492-493 495-497 500-504 506 508-515 517 522-529 533-535 541- 542 545-546 552-556 567-571 573 586-593 595-596 602 607-614 616 618-620 622 624 627-633 635-636 649 654-655 658 666 668 722-725 747 751-752 755 757-764 766 771 780-781 816 818 841- 849 863 872-874 880-881 883-885 893-895 900 902 928 969-970 973 979 1006-1009 1024-1028 1036 1056-1057 1070-1071 1082 1087-1088 1090-1094 1096-1099 1101-1103 1113 1115-1118 1120- 1121 1123-1125 1131 1133-1135 1137-1139 1141-1145 1156-1160 1165 1174-1175 1185-1190 1192-1193 1195-1196 1208-1209 1221- 1225 1227 1231-1232 1250 1252-1253 1258 1261 1264-1265 1279-

Tissue Origin	Tissue/ RNA Source	Library Name	SEQ ID NO:
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adult testis	GIBCO	ATS001	55 68 78-79 123-124 168-175 178-179 229-232 237-239 246-248 250-259 261-264 311-314 318-320 335-337 340-341 368-374 376 378-381 397 404-407 428-435 444 448-456 476-479 488 492-493 495-497 501-504 506 514-515 517 528-529 538 567-570 593 595- 596 602 613-614 616 637-640 645 649 666 668 686-688 690-691 704-706 708 722-723 727-728 732-741 743 753 829-832 841-849 851 856 867 869 872-874 880-881 884-885 887-889 891 900 902- 909 913 923-927 946-948 954 959 963-965 967-968 970 973 979 999-1000 1024-1028 1031-1035 1056-1057 1070-1071 1104-1110 1112 1115 1120-1121 1123 1131 1146-1148 1156-1160 1165 1167- 1173 1210 1231-1232 1247-1249 1264-1265 1284-1285 1299-1301 1303-1304 1307 1323-1325 1341-1344 1355-1359 1361-1363 1365- 1368 1370 1372-1373 1395-1399 1409 1411-1413 1424-1427 1458- 1460 1462-1465 1470-1471 1478-1481 1498 1503-1504 1506-1507 1529-1533 1536 1538-1539 1559 1561 1565-1566 1576-1578 1595 1604-1606 1612 1614 1628-1633 1635 1648-1652 1655 1664 1679 1686-1689 1698-1699 1703-1706 1711-1713 1716 1727 1730-1731 1772-1773 1782-1789 1843 1862-1865 1887-1890 1907-1910 1915- 1918 1923-1924 1926-1929 1974 2009-2011 2013-2015 2065 2114-

Tissue Origin	Tissue/ RNA Source	Library Name	SEQ ID NO:
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Genomic DNA from BAC 63118	Research Genetics (CITB BAC Library)	BAC001	2251-2252 2254-2263 2266-2275 2277-2281 2994-2997 3533-3536 3538-3547 3549-3558 3916-3921 3923-3932 3934-3936 4765 4776 4787 4798 4809 4821 4832 4843 4854 4865 4876 7944-7947
Genomic DNA from BAC 39316	Research Genetics (CITB BAC Library)	BAC002	2251-2252 2254-2263 2266-2275 2277-2281 2994-2997 3533-3536 3538-3547 3549-3558 3916-3921 3923-3932 3934-3936 5056-5060 5062
Genomic DNA from BAC 39316	Research Genetics (CITB BAC Library)	BAC003	2251-2252 2254-2263 2266-2275 2277-2281 2994-2997 3533-3536 3538-3547 3549-3558 3916-3921 3923-3932 3934-3936 4765 4776 4787 4798 4809 4821 4832 4843 4854 4865 4876 7944-7947
adult bladder	Invitrogen	BLD001	40-42 123-124 329-331 476 478-479 552-554 571 573 682-683 708 710-719 782 816 818 935-936 963-965 967-968 973 1070-1071 1113 1115-1118 1120-1121 1123 1156-1160 1165 1198-1201 1264- 1265 1341-1344 1355-1359 1361-1363 1395-1399 1470-1471 1478 1640-1641 1686-1689 1779 1781 1795 1895-1901 1915-1918 1965- 1967 1977-1978 1980-1989 1991 2002-2008 2039-2040 2114-2117 2188-2195 2197-2199 2220-2223 2234-2238 2240-2242 2276 2345- 2349 2464-2469 2690-2694 2764 2767-2768 2787 2789-2791 2835 2837 2842-2843 2849-2850 2853-2854 2857-2858 2910-2914 2975- 2976 3073-3077 3141-3142 3217 3385 3396 3669 3678 3688 3766 3937-3940 3996 4035-4039 4044 4172-4173 4176 4218 4220 4295 4377 4380-4382 4488 4806-4808 4810 4827-4831 4837 4847-4853 5138 5270-5271 5376-5380 5470 5654-5656 5873-5874 5918-5919 6201 6245 6560-6561 6836 6851-6854 6919 6978-6979 7054 7300- 7301 7393-7395 7462-7465 7491 7760
bone	Clontech	BMD001	1 22-23 28-29 39-42 44 52 55-56 61-65 67 71-72 74-76 80-98 100-

Tissue Origin	Tissue/ RNA Source	Library Name	SEQ ID NO:
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Tissue Origin	Tissue/ RNA Source	Library Name	SEQ ID NO:
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bone marrow	Clontech	BMD002	28-29 123-124 191 223-232 237-239 246-248 250-259 261-264 318-320 326-327 340-341 344 355 366 368-374 377 385-386 388 398-400 404-407 432 450-454 456 477 484-485 488 500 514-515 517 538 545-546 586-592 602-604 606-612 618-620 645 649 654-655 667 678 722-723 747 753 757-764 766-767 773 784 795 806 841-843 856 887-889 891 900 902 939-943 946-950 954 959 963-965 967-968 973 979 999-1000 1036-1040 1042-1043 1056-1057 1095 1115 1156-1160 1181 1191 1264-1265 1279-1281 1299-1301 1334-1336 1341-1344 1355-1359 1361-1363 1371 1377-1380 1391-1394 1402 1410 1424-1426 1432-1437 1447 1473-1475 1541-1542 1552-1558 1604-1606 1611 1628-1633 1635 1642-1643 1648-1652 1664 1690 1701-1704 1706 1718 1782-1789 1798 1809 1867 1881 1887 1892 1907-1909 1911-1913 1915-1918 1922 1938-1940 1992-1995 2016-2022 2037 2081-2083 2106-2108 2135-2137 2143 2155-2156 2158-2159 2185-2186 2188-2195 2197-2199 2201-2205 2207-2208 2232-2238 2240-2242 2246 2285-2286 2289-2294 2322-2327 2345-2346 2352-2356 2363-2365 2381-2382 2391-2394 2412-2417 2419-2423 2425-2427 2449 2454-2458 2460 2466-2469 2494 2496-2497 2503 2505-2506 2553-2554 2558-2562 2595-2597 2599 2617-2620 2625-2626 2628 2682 2699-2704 2744-2745 2764 2767-2768 2771 2803-2804 2822 2828 2836 2853-2854 2857-2858 2898 2909-2914 2982-2987 3003-3008 3010 3039-3040 3043-3050 3055-3063 3087-3091 3093 3116-3117 3179-3180 3209-3211 3213-3215 3223-3224 3262-3264 3358-3359 3416 3448 3473 3577 3728 3730 3732 3743 3893-3898 3913-3915 3937-3940 3954 3992 4003-4005 4016 4048-4049 4053 4066 4174 4191 4207 4209 4218 4220 4282 4316 4320-4323 4325 4329-4330 4336-4340 4392-4395 4516 4582-4585 4604-4605 4696 4814-4815 4847-4853 4872-4873 4884-4885 4892 4899 4928-4929 4940-4941 4943-4944 4948-4951 4978-4980 4985 4996 5010-5013 5069-5070 5099-5101 5107-5115 5117 5333-5335 5401-5404 5406-5407 5410 5531-5533 5645-5648 5654-5656 5667-5670 5694 5705 5752-5754 5807-5810 5841-5846 5848-5850 5861 5875-5878 5934-5935 5937-5938 6131-6132 6177 6181-6182 6198-6200 6206-6211 6231-6233 6256 6311-6313 6337-6338 6545-6546 6567 6698-6700 6709 6735 6849 6903 6906 6915 6917-6918 6920-6923 7002 7007-7010 7031 7098-7107 7109 7118 7121-7122 7231 7241 7251-7252 7321-7322 7377-7379 7393-7395 7440 7443-7445 7453-7460 7462-7465 7469 7479-7480 7517 7542 7659 7664-7665 7708 7719 7771-7772 7774 7808-7810 7821 7893-7894 7987 8024 8034-8035
bone marrow	Clontech	BMD004	7 9-11 178-179 722-723 747 973 2136 2341-2344 2389-2390 2455-2458 2955 4053 4066 4183-4185 4892 5818-5820 6922-6923 7377-7379 7808-7810 7893-7894

Tissue Origin	Tissue/ RNA Source	Library Name	SEQ ID NO:
bone marrow	Clontech	BMD007	28-29 363-364 460 474-475 552-554 1540 2106-2108 2136 2425-2427 2672-2673 2677 2682 2765 2822 4053 4066 5137 5141 5980 5991 6002 6012 6024 6922-6923 7186 7197 7453-7460 7469 8034-8035
adult colon	Invitrogen	CLN001	66 77 311-314 323-327 404-407 476 478-479 484-485 663-664 823-825 844-845 872-874 969 979 1036 1110 1112 1177-1179 1213-1214 1216-1218 1279-1281 1371 1380 1391 1395-1399 1402 1410 1523-1524 1528 1565-1566 1628-1633 1635 1642-1643 1657-1663 1705 1715-1717 1727 1747-1748 1751-1754 1867 1895-1901 1923-1924 1926-1929 1974 2039-2040 2081-2083 2102 2162-2163 2389-2390 2428 2430-2432 2466-2469 2699-2704 2710 2712 2792 2795 2808-2812 2900-2908 2955 3081 3092 3103 3114 3179-3180 3278-3279 3310 3732 3741-3742 3840-3842 3979-3985 4238 4336-4340 4369-4371 4436 4537-4539 4571-4574 4618-4619 4726-4729 4734-4735 4737-4739 4777 4805-4808 4810 4837 4976-4977 5155 5212-5215 5225 5298 5401-5404 5406-5407 5531-5533 5631-5632 5638 5696-5699 5761-5763 5789-5790 5918-5919 5952-5954 6022 6025-6029 6163 6171-6173 6181-6182 6235-6237 6284 6331 6333-6335 6353 6356-6358 6450-6451 6453 6525-6529 6578-6579 6681 6687-6688 6721 6973-6977 6988-6989 7087-7089 7340 7453-7460 7587-7589 7790 7942 7989-7990
mixture of 16 tissues-mRNAs*	various vendors*	CTL016	297-298 426-427 477 488 528-529 552-554 658 722-723 988 994 1037-1040 1042-1043 1124-1125 1146-1148 1904-1905 2284-2286 2563 3039-3040 4526-4527 4659-4663 4952 4954-4958 5594 5605 5616 5627 6755-6758 7377-7379 7808-7810
mixture of 16 tissues-mRNAs*	various vendors*	CTL021	7 28-29 294 376 378-381 436-441 476 478-479 484-485 533-535 552-554 844-845 852-853 1299-1301 1585-1586 2016-2022 2136-2137 2185-2186 2204-2205 2207-2208 2284 2377-2378 2535-2538 2540-2543 3171-3172 3234-3235 3548 3560 4256-4258 4892 4952 4954-4958 5107-5115 5117 5599-5602 5694 5705 6109 6260-6265 6267-6274 6420 6422 6574 6585 6915 6917-6918 6939-6942 7377-7379 7453-7460 7808-7810 7841-7842
mixture of 16 tissues-mRNAs*	various vendors*	CTL028	4017-4020 7808-7810
adult cervix	BioChain	CVX001	9-11 21 28-29 40-44 55-56 66 77 80-87 89-98 100-109 112-117 122-124 178-179 181-183 202-203 215-217 229-232 246-248 250-259 261-264 268 270-273 311-314 318-320 323-325 333 335-339 360-361 374 382-383 398 400 404-409 432 442-443 445-454 456 466 476 478-479 486-487 489 492-493 501-504 506 514-515 517 522-524 538-539 541-542 550 555-556 571 573-582 586-593 595-596 602 607-612 630-633 635-636 645 647-649 658-662 666 668 670-671 704-706 708 722-725 727-728 747 753 768-769 771-772 774-775 780-781 785 816 818 820-821 837 854-856 858-863 867 869 880-881 884-885 905-909 911-912 915-917 923-927 937 939-943 954 959 969-970 973 979 990-993 995-997 1019 1021 1030-1035 1041 1052 1056-1057 1063 1068-1072 1083 1089 1096-1103 1111 1114-1118 1122 1124-1125 1129-1130 1140 1165 1167-1172 1174-1176 1183 1185-1190 1194 1204 1211-1212 1221-1225 1227-1230 1236-1237 1254-1256 1267-1268 1286-1287 1289 1291-1293 1303-1304 1314-1316 1328-1331 1334-1336 1341-1344 1355-1359 1361-1363 1369-1370 1372-1373 1377-1379 1382-1390 1395-1399 1408 1416-1418 1423-1426 1428 1430 1446 1457-1460 1462-1465 1470-1471 1473-1478 1503-1504 1506-1507 1515 1534-1535 1543-1547 1549 1560 1564-1566 1572-1575 1580 1591 1595 1621-1623 1640-1643 1657-1663 1674 1676-1678 1690-1693 1695-1696 1698-1699 1703-1709 1716 1718 1727 1755-1760 1762-1763 1768-1771 1773-1774 1782-1789 1799-1804 1820 1825-1831 1836-1837 1839-1843 1845 1847-1848 1850-1851 1861-1867 1870 1874-1880 1882-1890 1895-1901 1907-1909 1931-1934 1946 1948-1951 1974 2010-2011 2013 2016-2022 2039-2040 2076 2085-2086 2088-2093 2105-2108 2110-2112 2124-2127 2137 2147-2156 2158-2159 2162-2166 2169-2174 2177-2178 2180 2188-2195 2197-2200 2204-2205 2207-2208 2216 2218 2230-2238 2240-2242 2284 2322-2327 2341-2344 2347-2350 2352-2356 2359-2361 2401-2406 2408-2410 2412-2417 2419-2423 2428 2430-2434 2452-2458 2480 2494-2499 2503 2505-2506 2515-2516 2518-2527 2533 2551-2552 2555 2557-2565 2569-2571

Tissue Origin	Tissue/ RNA Source	Library Name	SEQ ID NO:
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diaphragm	BioChain	DIA002	229-232 335-337 385-386 436-441 708 923-927 1006-1009 1211- 1212 1299-1301 1498 1541-1542 2806-2807 3560 4250-4255 4884- 4885 6763 7289-7290 7987
endothelial cells	Stratagene	EDT001	9-11 21 24-25 28-29 36 40-45 47 49-51 55-56 66 77-79 168-169 178-179 191-195 215-217 229-233 237-239 246-248 250-259 261- 266 268 270-273 282-284 311-320 323-325 329-331 335-337 340- 341 344 349-361 365-373 375 377 387-400 404-409 423 426-431 433-449 455 461-465 467-468 477 486-489 492-493 500 508-515 517-524 528-529 545-546 552-554 567-570 574-580 584-585 593 595-600 602-604 606-614 616 618-620 622 624 627-629 637-640

Tissue Origin	Tissue/ RNA Source	Library Name	SEQ ID NO:
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Tissue Origin	Tissue/ RNA Source	Library Name	SEQ ID NO:
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Genomic clones from the short arm of chromosome 8	Genomic DNA from Genetics Research	EPM001	2251-2252 2254-2263 2266-2275 2277-2281 2994-2997 3533-3536 3538-3547 3549-3558 3916-3921 3923-3932 3934-3936 4765 4776 4787 4798 4809 4821 4832 4843 4854 4865 4876
Genomic clones from the short arm of chromosome 8	Genomic DNA from Genetics Research	EPM003	2251-2252 2254-2263 2266-2275 2277-2281 2994-2997 3533-3536 3538-3547 3549-3558 3628-3629 3916-3921 3923-3932 3934-3936
Genomic clones from the short arm of chromosome 8	Genomic DNA from Genetics Research	EPM004	2251-2252 2254-2263 2266-2275 2277-2281 2994-2997 3533-3536 3538-3547 3549-3558 3628-3629 3916-3921 3923-3932 3934-3936 4765 4776 4787 4798 4809 4821 4832 4843 4854 4865 4876 5928 7023
esophagus	BioChain	ESO002	28-29 40-42 164-165 477 488 622 624 1110 1112 1115 2232-2233 3567 5752-5754 5918-5919 7289-7290 7808-7810 8024
fetal brain	Clontech	FBR001	178-179 323-325 1116-1118 1202-1203 1205-1207 1395-1399 1409 1428 1430 1486-1488 1694 1697 1701-1702 1737 1739-1740 1782 2024-2026 2147-2152 2710 2712 2899 2919 3023 3025 3087-3091 3093 3116-3117 3150 3322 3585-3586 3717-3718 3720-3722 3732 3867-3870 4021 4329-4330 4341 4805 4884-4885 4906 5641-5642 5760 5771 5782 6702-6703 6934-6937 7587-7589 7790
fetal brain	Clontech	FBR004	40-42 53 658 880-881 1022 1114 1355-1359 1361-1363 1667-1670 1729 1763 1772 1850 1861-1863 1870 1872-1873 1965-1967 2162-2163 2332-2339 2352-2356 2454 2494 2511 2793 2936-2937 3003-3008 3575-3576 3579-3580 3696 3698-3702 3893-3898 3909-3910 3912 3937-3940 4513-4514 4529 4845 4856-4860 5590 6636-6638 7113-7115 7161 7808-7810 8044-8046

Tissue Origin	Tissue/ RNA Source	Library Name	SEQ ID NO:
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fetal brain	Clontech	FBRs03	
fetal brain	Invitrogen	FBT002	40-42 47 60 69-73 178-179 210-212 237-239 265-266 311-314 335- 337 360-361 374 387 389-397 466 477 486-489 500 541-542 603- 604 606-614 616 627-629 654-655 744-745 826-827 841-845 872- 874 900 902 969 973 979 999-1000 1087-1088 1090-1094 1110 1112 1119 1156-1162 1164 1174-1175 1191-1193 1195-1196 1221- 1225 1227 1241-1242 1264-1265 1305-1306 1308-1309 1314-1317 1319 1338 1346-1348 1350-1359 1361-1363 1369 1376-1379 1381 1395-1399 1405-1406 1415 1428 1430 1432-1439 1442-1445 1479- 1481 1484-1485 1523-1524 1528 1534-1535 1552-1558 1562-1563 1601 1603 1612 1614-1619 1638-1641 1686-1693 1695-1696 1700 1703-1704 1706 1718 1730-1731 1763 1765-1767 1790 1792-1794 1823-1824 1844 1874-1876 1895-1901 1904-1905 1911-1913 1930- 1934 1938-1940 1962 1996-2000 2010-2011 2013 2024-2033 2035- 2036 2041 2052 2094-2097 2099-2100 2106-2108 2128-2129 2131- 2134 2147-2152 2164-2166 2169-2174 2177-2178 2180-2181 2234- 2238 2240-2242 2289-2294 2322-2327 2374 2381-2382 2385 2395- 2400 2407 2418 2429 2437 2448 2459 2463 2466-2470 2480 2482

Tissue Origin	Tissue/ RNA Source	Library Name	SEQ ID NO:
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fetal heart	Invitrogen	FHR001	229-232 903-904 1124-1125 1239 1305-1306 1308-1309 1355-1359 1361-1363 1690 2204-2205 2207-2208 2533 2638 3039-3040 3506 4053 4066 4320-4323 4325 4969-4971 5752-5754 7289-7290 7641-7643 7771-7772 7987
fetal kidney	Clontech	FKD001	9-11 66 71-72 77-79 196-198 200 229-232 246-248 250-259 261-264 309 335-337 397-398 400 432 450-454 456 476-479 483 486-489 500-504 506 514-515 517 525-526 538 552-556 567-570 602-604 606 645 658 726 753 769 856 872-874 884-885 923-927 954 959 973 999-1000 1006-1010 1051 1101-1103 1124-1125 1131 1151 1192-1193 1195-1196 1213-1214 1216-1218 1221-1225 1227 1264-1265 1286 1318 1327 1338 1355-1359 1361-1363 1371 1380 1391 1395-1399 1402 1408-1413 1462-1465 1470-1471 1534-1535 1559 1561 1563 1648-1652 1680 1694 1697 1768-1771 1904-1905 1936 1947 2016-2022 2076 2102-2105 2110-2112 2137 2177-2178 2180 2200 2204-2205 2207-2208 2284 2322-2327 2350 2359-2361 2455-2458 2496-2497 2575 2638 2678-2682 2708 2744-2745 2750-2753 2762-2764 2767-2768 2787 2792 2808-2812 2898 2909 2940 2973-2974 2982-2987 3039-3040 3094-3095 3101-3102 3104-3105 3111 3116-3117 3122 3212 3219 3222 3230 3233 3311-3313 3325 3332-3333 3439 3468-3469 3499-3501 3521-3523 3575-3576 3579-3580 3583 3600 3695 3713-3714 3726 3749 3763 3777 3799 3817-3819 3890 3900-3901 3956 3998-3999 4055-4056 4091-4097 4231 4260-4264 4332 4369-4371 4465 4472 4523 4618-4619 4628-4631 4633-4642 4644-4649 4698 4710 4744 4747 4791 4847-4853 4972 4978-4980 5124-5126 5128-5130 5149 5151 5162 5204-5205 5207 5216 5218-5221 5233 5336 5338 5356 5399 5510 5540-5542 5590 5594 5605 5616 5627 5872 5875-5878 5918-5919 5956 5961 6022 6025-6029 6103 6108 6124-6128 6413-6414 6641-6642 6696 6837 6839-6848 6857-6859 6861-6862 6973-6977 7014 7098-7107 7109 7119 7175 7230 7238 7280 7285 7296 7307 7318 7329 7342 7353 7370 7377-7379 7423 7425-7426 7441 7587-7589 7634-7635 7706 7808-7810 7839 7841-7845 7967 8012-8016
fetal kidney	Clontech	FKD002	28-29 318-320 385-386 426-430 477 488 552-554 686-688 690-691 1056-1057 1070-1071 1087-1088 1090-1094 1124-1125 1173 1264-1265 1424-1426 1825-1826 1828-1831 1874-1876 2204-2205 2207-2208 2359-2361 5051-5052 5654-5656 7377-7379 7425-7426 7808-

Tissue Origin	Tissue/ RNA Source	Library Name	SEQ ID NO:
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fetal lung	Clontech	FLG001	40-42 335-337 602 617 666 668 722-723 979-985 999-1000 1056- 1057 1341-1344 1370 1372-1373 1448-1449 1451-1456 1499 1691- 1693 1695-1696 1703-1704 1706 1711-1713 1782 1910 2016-2022 2039-2040 2118 2120-2123 2204-2205 2207-2208 2230-2231 2234- 2238 2240-2242 2282-2283 2363-2365 2425-2427 2664-2665 2667 2690-2694 2730-2733 2787 2982-2987 3095 3230 3328 3330 3468- 3469 3499-3501 3521-3523 3717-3718 3720-3722 4053 4066 4083- 4085 4236 4351 4473 4575 4577-4579 4628-4631 4633-4642 4644- 4649 4703 4745 4847-4853 4892 4917-4918 4921-4926 4948-4951 5455 5613-5615 5617-5618 5628 5694 5705 5873-5874 6035 6046 6057 6413-6414 6515 6681 6984-6987 7289-7290 7367 7425-7426 7437-7438 7839 8010-8011 8044-8046
fetal lung	Invitrogen	FLG003	19 201 237-239 309 311-314 329-331 338-339 360-361 426-427 433 444 455 545-546 658-662 708 710-719 757-764 766 844-845 883 892 900 902 946-948 979 1001 1031-1035 1073-1080 1165 1177- 1179 1243-1245 1355-1359 1361-1363 1395-1399 1408 1462-1465 1549 1560 1562 1604-1606 1640-1641 1657-1663 1705 1716 1727 1755-1760 1762 1773 1775-1777 1843 1974 2016-2022 2039-2040 2124-2129 2131-2134 2136 2284 2345-2349 2363-2365 2389-2390 2428 2430-2432 2528 2539 2545 2556 2567 2638 2682 2706-2708 2730-2733 2750-2753 2787 2808-2812 2898 2909 3039-3040 3078- 3080 3082-3086 3101-3102 3104-3105 3151-3155 3209-3211 3213- 3215 3356-3357 3457 3468-3469 3628-3629 3738 3741-3742 3764- 3765 3791-3794 3806-3807 3809-3810 3913-3915 3937-3940 4016- 4020 4053 4066 4091-4097 4114-4120 4136-4142 4144-4146 4150- 4153 4157-4162 4164-4171 4218 4220 4307 4351 4377 4606 4659- 4663 4667 4837 4847-4853 4872-4875 4877-4880 4917-4918 4921- 4926 4981-4984 4986-4989 5090-5093 5095 5131-5132 5142-5143 5212-5215 5807-5810 5862-5868 5870 5977-5978 5987-5988 6147 6304 6404-6406 6413-6414 6454 6491 6850 6899-6900 6913 6933 6973-6977 6991 7012-7013 7016 7087-7089 7126 7186 7191 7197- 7203 7256 7377-7379 7570 7600 7602 7609-7610 7676 7678-7680 7696 7698-7700 7808-7810 7874-7879 7954
fetal lung	Clontech	FLG004	265-266 476 478-479 552-554 1056-1057 1165 1365-1368 1424- 1426 1552-1558 1690 2699-2704 3260-3261 7118 7121
fetal liver-spleen	Columbia University	FLS001	1 3 79-12 14 26-30 39 45 47 49-51 55 66 71-72 77-87 89-98 100- 109 112-117 119-121 123-124 144 155 166-167 178-179 199 201- 207 210 215-217 222-234 237-243 246-248 250-259 261-266 268 270-279 281-284 295-301 309 311-314 318-320 323-337 340-341 344 349-361 363-383 385-400 404-407 411-420 422 426-456 460 466 476-483 486-489 495-497 500-504 506-515 517-526 528-532 536-538 540-549 551-558 567-571 573-580 584-593 595-604 606- 616 618-624 627-645 649-655 658-666 668 672-676 679-681 686- 688 690-694 704-708 722-723 729-730 751-753 755 757-764 766- 768 771-775 779-785 795 806 816 818-827 829-837 840-849 854- 863 867-869 872-874 876-879 883-885 887-891 900 902 905-909 911-913 915-917 919-921 923-927 929-930 932 934 939-943 945 949-950 954 960-961 963-970 973-976 978-985 990-993 995-997 999-1013 1015-1019 1023 1031-1035 1037-1040 1042-1043 1049- 1050 1053-1057 1063 1070-1072 1083-1086 1089 1095 1100-1103 1111 1114-1125 1127-1129 1131-1136 1140 1146-1148 1156-1162 1164-1165 1167-1172 1174-1179 1182-1191 1194 1198-1201 1204 1208-1209 1211-1214 1216-1225 1227-1232 1250-1251 1253-1257 1263-1265 1267-1268 1279-1281 1284-1285 1287 1289-1295 1297- 1301 1303-1306 1308-1317 1319 1322-1325 1328-1331 1334-1337 1339-1344 1346-1348 1350-1359 1361-1363 1365-1368 1377-1379 1381-1387 1392-1400 1404 1408 1411-1415 1420-1421 1423-1428 1430 1438-1440 1442-1445 1447 1458-1460 1462-1465 1470-1471 1473-1477 1479-1481 1486-1493 1495-1496 1498-1499 1503-1504 1506-1509 1514-1515 1517 1520 1523-1524 1529-1533 1536 1538 1540-1542 1548 1552-1559 1561 1564-1569 1571 1576-1601 1603-

Tissue Origin	Tissue/ RNA Source	Library Name	SEQ ID NO:
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infant brain	Columbia University	IBM002	218-220 426-427 476 478-479 970 1119 1211-1212 1264-1265 1409 1657-1663 1667-1670 1681-1684 1732-1736 1846 2097 2099-2100 2114-2117 2380 2494 2682 2762 3107 3221 3311 3449-3450 3452 4022 4044 4046 4377 4475 4623-4624 4693 4765 4776 4787 4798 4809 4821 4832 4843 4845 4854 4865 4876 5050 5125-5126 5128-5130 5365 6531 6681 6711-6712 6761 6902 7131 7808-7810
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melanoma from cell line ATCC #CRL 1424	Clontech	MEL004	9-11 25 28-29 36 60-65 178-180 233 267 315-320 404-409 428-430 433 442-444 450-456 461-465 467-468 500 514-515 517-521 541-542 552-554 571 573 584-585 603-604 606 618-620 637-640 666 668 670-671 726 732-741 743 757-764 766 833-835 851 915-917 969 973 987-988 991-997 1018-1019 1058-1062 1120-1121 1123-1125 1131 1136 1167-1172 1176 1185-1190 1250 1253 1288 1355-1359 1361-1363 1377-1379 1381 1395-1399 1424-1426 1428 1430 1448-1449 1451-1456 1484-1485 1489-1493 1495-1496 1517 1541-1542 1572-1575 1648-1652 1657-1663 1680 1686-1689 1765-1767 1772 1782-1790 1792-1794 1843 1845 1868-1869 1877-1880 1882-1886 1903-1905 1922 1968-1969 1971-1972 2010-2011 2013 2038-2040 2081-2083 2085-2086 2088-2091 2105 2143 2162-2163 2181 2234-2238 2240-2242 2289-2294 2345-2346 2350 2359-2361 2381-2382 2425-2427 2433-2434 2450-2451 2503 2505-2506 2564-2565 2580-2583 2638 2646-2654 2656-2665 2667 2674-2676 2682 2744-2745 2781-2783 2785-2787 2795 2798-2802 2827 2829 2856 2865 2876 2982-2987 3043-3050 3071-3077 3081 3087-3093 3103 3111 3114 3116-3117 3123-3125 3212 3218 3220 3222-3224 3233-3235 3286 3342 3416-3417 3419 3439 3454-3456 3458-3459 3499-3501 3560 3600 3683 3713-3714 3717-3718 3720-3722 3743 3796 3802 3821-3822 3867-3870 3887 3891 3899 3954 4015 4133 4183-4185 4286 4309-4310 4336-4340 4344-4345 4347-4349 4357 4368 4372 4379 4415 4425 4440 4465 4488 4561 4628-4631 4671-4672 4702 4781-4784 4813 4817 4838-4841 4904 4907-4908 4910 4973 5014-5017 5056-5060 5062 5131-5132 5136-5137 5141 5303 5336 5520-5522 5577 5594 5605 5616 5627 5657-5659 5661-5663 5677-5680 5694 5705 5715 5717-5718 5814 5823 5825 5836 5847 5851-5852 5858 5873-5874 5914 6088 6143-6144 6153-6154 6260-6265 6267-6274 6336 6420 6422 6450-6451 6453 6479 6506-6507 6509 6583-6584 6586-6587 6643 6702-6703 6727 6755-6758 6804 6806 6851-6855 7108 7116 7120 7168 7194-7195 7408 7419 7461-7465 7472

Tissue Origin	Tissue/ RNA Source	Library Name	SEQ ID NO:
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Tissue Origin	Tissue/ RNA Source	Library Name	SEQ ID NO:
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induced neuron cells	Stratagene	NTD001	40-42 246-248 250-259 261-266 335-337 411-420 422 428-430 555- 556 567-570 613-614 616 703 771 854-855 858 872-874 915-917 969 1006-1009 1018 1056-1057 1063 1072 1083-1085 1089 1100 1111 1122 1129 1140 1264-1265 1291-1293 1382-1384 1395-1399 1529-1535 1615-1619 1657-1663 1701-1702 1718 1772 1783-1790 1792-1794 1843 1847 1864-1865 1996-2000 2016-2022 2024-2026 2081-2083 2105-2108 2204-2205 2207-2208 2220-2223 2322-2327 2332-2339 2345-2346 2350 2363-2365 2369-2370 2575 2625-2626 2628 2638 2641-2642 2672-2673 2679-2682 2742-2743 2792 2798- 2802 2835 2837 2919 2938-2939 2941-2942 3011-3012 3014 3039- 3040 3056-3063 3096 3116-3117 3123-3125 3134-3135 3150-3155 3230 3354 3395 3560 3617 3889 3958-3964 3977 3990 4017-4020 4087 4089-4090 4256-4258 4289 4329-4330 4406 4446-4449 4547- 4548 4571-4574 4623-4624 4664 4666 4781-4784 4802 4811 4827- 4831 5137 5141 5272 5274 5448 5563 5566-5569 5631-5632 5644 5654-5656 5694 5705 5791-5792 5794-5799 5908-5909 6022 6025- 6029 6092 6186-6188 6191 6198 6260-6265 6267-6274 6294 6360 6413-6414 6424-6427 6658-6660 6662-6666 6727 6883 7049-7051 7130 7146 7328 7375 7377-7379 7386 7441 7641-7643 7790 7808- 7810 7996
retinoic acid- induced neuronal cells	Stratagene	NTR001	9-11 28-29 178-179 323-325 431 434-441 477 486-489 559-560 562 666 668 844-845 949-950 969 1070-1071 1146-1148 1174-1175 1264-1265 1299-1301 1355-1359 1361-1363 1783-1789 1843 2200 2345-2346 4102-4103 4748 4791 5272 5274 7291-7293 7771-7772 7808-7810
neuronal cells	Stratagene	NTU001	28-29 71-72 80-87 89-98 100-109 112-118 340-341 368-373 477 488 501-504 506 552-554 584-592 666 668 686-688 690-691 707 826-827 841-845 854-855 858 872-874 900 902 911-912 919-921 949-953 956 963-965 967-968 1006-1009 1011-1013 1015-1018 1056-1057 1124-1125 1156-1160 1243-1245 1264-1265 1299-1301 1303-1304 1346-1348 1350-1359 1361-1363 1438-1439 1442-1445 1458-1460 1552-1558 1572-1575 1587-1588 1601 1603 1621-1622 1703-1704 1706 1747-1748 1751-1754 1845 1862-1863 1895-1901

Tissue Origin	Tissue/ RNA Source	Library Name	SEQ ID NO:
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pituitary gland	Clontech	PIT004	66 77 318-320 382-383 461-465 467-468 518-521 613-614 616 649 666 668 980-985 1056-1057 1165 1202-1203 1205-1207 1228-1230 1257 1284-1285 1303-1304 1576-1578 1648-1652 1654 1701-1702 1711-1713 1749 1783-1789 1849 1857 1977-1978 1980-1989 1991 2002-2008 2039-2040 2106-2108 2234-2238 2240-2242 2345-2346 2350 2533 2553-2554 2563-2565 2575 2629-2631 2638 2682 2787 3096 3151-3155 3212 3218 3222 3233 3422 3499-3501 3521-3523 3560-3561 3602 3613 3732 3788-3790 3867-3870 3902 3976 3996 4024-4025 4035-4039 4391 4445 4549-4550 4552-4553 4625 4664 4666 4668-4669 4703 5125-5126 5128-5130 5136 5203 5452-5454 5478-5480 5681 5987-5988 5998-6001 6130 6183 6220-6221 6862 7062 7186 7197 7790 7871-7872 8044-8046
placenta	Clontech	PLA003	205-206 282-284 385-386 552-554 844-845 1124-1125 2124-2127 2204-2205 2207-2208 2955 3026-3034 3036-3038 3732 4091-4097 4326-4328 5654-5656 5841-5845 6319-6320 6322-6330 6450-6451 6453 7808-7810
prostate	Clontech	PRT001	40-42 214 233 282-284 318-320 408-409 426-427 436-441 450-454 456 500 518-521 567-570 581-582 584-585 593 595-596 618-620 637-640 647-649 658 672-673 707 726 732-741 743 872-874 969 1005 1031-1035 1037-1040 1042-1046 1056-1057 1086 1101-1103 1115 1165 1167-1172 1191 1221-1225 1227-1230 1258 1261 1305- 1306 1308-1309 1355-1359 1361-1363 1365-1368 1382-1384 1411- 1413 1416-1419 1447 1473-1475 1500 1541-1547 1550-1551 1559 1561 1580 1591 1612 1614-1619 1644 1646 1674 1676-1678 1686- 1689 1737 1739-1740 1775-1777 1783-1789 1823-1826 1828-1831 1843 1862-1863 1887 1904-1905 1910 1922 1941-1945 1968-1969 1971-1972 2010-2011 2013 2084-2086 2088-2091 2118 2120-2123 2136-2137 2144 2201-2203 2216 2218 2345-2346 2350 2359-2361 2389-2390 2425-2428 2430-2432 2450-2451 2464-2465 2480 2495 2500-2502 2533 2544 2546 2549-2552 2558-2562 2584-2586 2588- 2589 2627 2706-2707 2742-2745 2787 2789-2791 2795 2823-2824 2842-2843 2922 2924 2943-2944 2955 2982-2987 3095 3116-3117 3227-3229 3271-3272 3303 3305 3313 3398-3400 3436-3437 3485 3499-3501 3517-3519 3585-3586 3588-3589 3631 3679 3681 3732 3736-3737 3739 3755-3757 3766 3777 3783-3784 3802 3828 3851- 3852 4063 4067-4068 4072-4074 4183-4185 4286-4288 4341 4355- 4356 4358-4360 4387 4392-4395 4401 4404-4405 4433 4443 4464 4466-4467 4473 4505-4508 4628-4631 4650 4699-4701 4703 4753 4755-4756 4774-4775 4937-4939 4959-4962 4997-4998 5002-5006 5008-5009 5056-5060 5062 5090-5093 5095 5137 5141 5171-5172 5174-5175 5399 5420 5435 5457 5526 5573 5583 5610-5611 5949 5962-5963 5966-5967 6004 6007 6069 6198 6202-6203 6235-6237 6292 6333-6335 6443-6446 6479 6612 6687-6688 6735 6771 6782 6794 7087-7089 7238 7248 7284 7286-7287 7377-7379 7462-7465 7482 7499 7624-7627 7667 7738-7739 7928-7930 7932-7933 7987 8001 8034-8035 8044-8046
rectum	Invitrogen	REC001	40-42 123-124 265-266 282-284 323-327 387 389-396 404-409 411- 420 422-423 476 478-482 484-487 489 500 518-521 559-560 562 586-592 617 674-676 744-745 747 823-825 841-843 892 896-899 969 979 990 1022 1036 1115-1118 1120-1121 1123 1213-1214 1216-1218 1447 1479-1481 1563 1572-1575 1580 1591 1604-1606 1612 1614 1640-1643 1657-1663 1679 1686-1697 1703-1704 1706

Tissue Origin	Tissue/ RNA Source	Library Name	SEQ ID NO:
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salivary gland	Clontech	SAL001	2 55 110 178-179 181-183 221 237-239 246-248 250-259 261-264 282-284 321 323-325 328-331 335-337 340-343 345-348 476-479 484-485 488 508-513 545-546 552-554 649 663-664 708 747 773 784 795 806 838 844-845 859-862 872-874 1019 1036 1049 1081 1133-1135 1165 1202-1203 1205-1209 1211-1212 1303-1304 1328-1331 1346-1348 1350-1359 1361-1363 1427 1462-1465 1498 1657-1663 1681-1684 1698-1699 1730-1731 1772 1782 1843 1845 1877-1886 1892 1895-1901 1931-1934 2010-2011 2013 2039-2040 2136 2141 2146 2157 2168 2179 2187 2196 2206 2217 2228 2232-2242 2244 2253 2265 2352-2356 2359-2361 2363-2365 2504 2510 2517 2544 2546 2549-2550 2555 2557 2564-2565 2575 2600-2601 2638 2682 2690-2693 2699-2704 2787 2842-2843 2846 3011-3012 3014 3039-3040 3043-3050 3095 3116-3117 3160-3168 3179-3180 3212 3222 3233 3323 3398-3400 3425-3428 3431-3432 3560 3575-3576 3579-3580 3626 3639-3645 3647-3656 3658-3667 3670-3672 3696 3698-3702 3749 3799 4002 4009 4035-4039 4207 4209 4218 4220 4265 4357 4368 4379-4382 4389 4400 4487 4598 4625 4696 4726-4727 4737-4739 4745 4796-4797 4814-4815 4817 4884-4885 4976-4977 5082 5166-5167 5270-5272 5274 5337 5455 5482 5484-5485 5501-5504 5506-5509 5537 5539 5645-5648 5654-5656 5761-5763 5833-5834 5873-5874 5934-5935 5937-5938 6163 6293 6411 6443-6446 6547-6548 6771 6782 6794 6851-6854 7453-7460 7487-7489 7512 7779-7780 7808-7810 7922-7923 7993-7995
salivary gland	Clontech	SALs03	484-485 613-614 616 887-889 891 1355-1359 1361-1363 2510 2517 6684 6695 7377-7379 7580 7590 7601 7612 7622 7633
skin fibroblast	ATCC	SFB001	903-904 1355-1359 1361-1363 1874-1876 2533 2638 2682 2744-2745 3212 3222 3233 3260-3261 3417 3419 4526-4527 4561 6198 6260-6265 6267-6274
skin fibroblast	ATCC	SFB002	584-585 903-904 1058-1061 1317 1319 1355-1359 1361-1363 1621-1622 2395 2397-2400 2638 3212 3222 3233 4102-4103 4369-4371 4526-4527 4745 5694 5705 6198 6260-6265 6267-6274
skin fibroblast	ATCC	SFB003	477 488 584-585 1231-1232 1355-1359 1361-1363 2016-2022 4526-4527 5918-5919 6198
small intestine	Clontech	SIN001	80-87 89-98 100-109 112-117 210 476 478-479 484-485 501-504 506 514-515 517 552-554 584-585 617 686-688 690-691 707 722-723 726 732-741 743 747 829-832 841-843 872-874 878 887-889 891 900 902 905-909 915-917 962 969 980-985 1005 1070-1071 1176 1247-1249 1286 1339-1340 1346-1348 1350-1354 1392-1394 1409 1420 1473-1475 1681-1684 1690 1703-1704 1706 1737 1739-1740 1775-1778 1796-1797 1848 1851 1881 1892 1895-1901 1935 2016-2023 2034 2137 2230-2231 2352-2356 2359-2361 2401-2406 2408-2410 2494 2564-2565 2613-2615 2708 2750-2753 2774-2776 2803-2804 2839-2841 2851 2855 2930-2931 2938-2939 2941-2942 2955 3020-3022 3144-3146 3149 3217 3255 3299-3302 3362 3385 3396 3422 3499-3501 3520 3560 3605 3614 3639-3645 3647-3656 3658-3667 3670-3672 3675 3717-3718 3720-3722 3732 3777 3803 3904-3905 3988-3989 4002 4201-4202 4271-4272 4281 4341 4433 4443 4445 4461 4490 4554 4565 4576 4607-4609 4611-4613 4628-

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skeletal muscle	Clontech	SKM001	7 178-179 229-232 246-248 250-259 261-264 323-325 332 334 404-407 428-430 476-479 488 627-629 744-745 748-749 771 773 784 795 806 863 878 880-881 887-889 891 900 902-904 911-912 919-921 990 1146-1148 1273-1275 1299-1301 1370 1372-1373 1395-1399 1498 1517 1596-1600 1714 1730-1731 1755-1760 1762 1845 1887 1895-1901 2027-2033 2035-2036 2105 2188-2195 2197-2199 2234-2238 2240-2242 2425-2427 2452-2453 2466-2469 2529-2531 2584 2716-2717 2744-2745 2950 2961-2972 2980 2991 3276 3430-3432 3468-3469 3548 3560 3581-3582 3615-3616 3937-3940 4010-4011 4016 4172-4173 4176 4244-4245 4320-4323 4325 4373-4374 4446-4449 4455 4650 4708 4711 4728-4729 4737-4739 4847-4853 4897 4969-4973 5441 5478-5480 5591-5593 5595-5596 5752-5754 6040-6042 6092 6443-6446 6553-6554 6601 6605 6715-6716 6933 7123-7125 7190 7289-7290 7512 7517 7551-7553 7738-7739 7779-7780 7987 8024
skeletal muscle	Clontech	SKM002	584-585 887-889 891 903-904 1888-1890 3548 3592-3596 6260-6265 6267-6274
skeletal muscle	Clontech	SKMS03	584-585 887-889 891 903-904 1888-1890 7551-7553
skeletal muscle	Clontech	SKMS04	887-889 891 903-904 1198-1201 1888-1890 2638 4847-4853 7098-7107 7109
spinal cord	Clontech	SPC001	9-11 40-42 53 66 71-73 77 80-87 89-109 112-117 123-124 133 178-179 194-195 246-248 250-259 261-264 282-284 311-314 328 335-337 375 382-383 397 411-420 422 426-427 433 444-447 455 476-479 488 500 508-515 517 528-529 545-546 552-554 584-585 597-600 602 630-633 635-636 647-648 659-662 666 668 686-688 690-691 708 729 771 780-781 876-877 923-927 929 959-961 969 973 979 988 994 999-1000 1002-1003 1006-1009 1031-1035 1063 1072-1080 1083 1089 1100 1111 1114-1115 1122 1124-1125 1129 1136 1140 1202-1203 1205-1207 1241-1242 1299-1301 1305-1306 1308-1309 1341-1344 1346-1348 1350-1359 1361-1363 1365-1368 1395-1399 1448-1456 1461 1472 1484-1485 1499 1525 1528 1534-1535 1612 1614 1621-1622 1648-1652 1657-1663 1665-1666 1698-1704 1706 1718 1732-1736 1738 1747-1748 1750-1760 1762-1763 1775-1777 1783-1789 1836-1837 1839-1843 1845 1862-1863 1866-1867 1874-1876 1895-1901 1910 1923-1924 1926-1929 1935 1938-1940 1965-1967 1977-1978 1980-1989 1991 1996-2001 2010-2013 2016-2023 2034 2039-2041 2052 2063 2118 2120-2123 2136 2143 2153-2154 2216 2218 2220-2223 2234-2238 2240-2242 2276 2289-2294 2319-2321 2345-2350 2352-2356 2359-2361 2466-2469 2494 2509 2534-2538 2540-2543 2551-2552 2558-2562 2564-2565 2575 2579 2584-2586 2588-2589 2632-2634 2638 2679-2686 2688 2690-2693 2714-2715 2772 2787 2798-2804 2813 2823-2824 2839-2841 2856 2865 2876 2921 2930-2931 2933 2946-2948 2950-2951 2955 2961-2972 2980 2982-2987 2989-2993 3020-3022 3039-3040 3052 3056-3063 3078-3080 3082-3091 3093 3095 3101-3102 3104-3105 3116-3117 3120 3150-3155 3183 3194 3203 3221 3223-3224 3234-3235 3246-3248 3299-3302 3347 3350 3363 3374 3393 3433-3434 3454-3456 3499-3502 3506 3521-3523 3560 3605 3681-3682 3713-3714 3762 3791-3794 3806-3807 3809-3810 3814 3832-3833 3853-3854 3856-3859 3862-3865 3867-3870 3887 3909-3910 3912 3986 3990 3998-3999 4010-4011 4064 4102-4103 4126 4183-4185 4193 4230 4241 4248 4287-4288 4373-4374 4396 4429 4464 4466-4467 4473 4483 4490 4549-4550 4552-4553 4587 4590-4591 4599 4610 4633-4642 4644-4649 4651-4653 4655-4658 4732 4749 4838-4841 4847-4853 4884-4885 4893-4896 4899 4906 4952 4954-4958 4978-4980 5002-5006 5008-5009 5094 5118-5120 5138 5144-5146 5156-5161 5163 5173 5184 5195 5206 5216 5218-5221 5223 5228-5232 5236-5240 5329-5330 5333-5335 5376-5380 5435 5441 5452-5454 5462-5463 5478-5480 5497 5534-5536 5631-5632 5634 5636 5667-5670 5694 5705 5707 5713-5714 5786 5862-5868 5870 5872 5979 5981-

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thalamus	Clontech	THA002	168-169 349-354 356-361 374 382-383 432 436-441 476 478-479 528-529 538 581-582 603-604 606 645 666 668 744-745 753 757-764 766 780-781 816 818 841-843 856-857 868 879 890 945 954 963-965 967-969 979 1073-1080 1120-1121 1123 1165 1185-1190 1202-1203 1205-1209 1290-1293 1305-1306 1308-1309 1374-1375 1385-1387 1395-1399 1478 1628-1633 1635 1640-1641 1665-1666 1691-1693 1695-1696 1703-1704 1706 1730-1731 1746 1763 1790 1792-1794 1796-1797 1845 1881 1892 1904-1905 1923-1924 1926-1929 1931-1934 1965-1967 1996-2000 2188-2195 2197-2199 2204-2205 2207-2208 2289-2294 2347-2349 2352-2356 2359-2361 2383-2384 2386 2425-2427 2535-2538 2540-2543 2564-2565 2575-2577 2682 2690-2693 2716-2717 2737 2739-2741 2772 2781-2783 2785-2786 2853-2854 2857-2858 3087-3091 3093 3096 3101-3102 3104-3105 3229 3234-3235 3310 3358-3361 3364-3373 3375-3384 3386-3388 3449-3450 3452 3491-3493 3495 3499-3501 3513 3601 3603-3604 3715 3788-3790 3843 3853-3854 4035-4039 4138-4142 4144-4146 4250-4255 4309-4310 4320-4323 4325 4369-4371 4373-4374 4392-4395 4416-4417 4491-4493 4616-4617 4842 4844 4847-4853 4952 4954-4958 4965 5069-5070 5168-5169 5272-5274 5284 5409 5443 5540-5541 5657-5659 5661-5663 5678-5680 5913 6148-6152 6195-6196 6209-6211 6249-6250 6306-6309 6368-6369 6394 6421 6432 6450-6453 6708 6727 6761 6837 6839-6848 6915 6917-6918 6943-6947 6988-6989 7029-7030 7049-7051 7179-7180 7222 7328 7400-7405 7587-7589 7647 7677 7686 7697 7736 7874-7879 7943 7993-7995
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thymus	Clontech	THMc02	6 9-11 20-21 55 61-66 77 80-87 89-98 100-109 112-118 122-124 164-165 196-197 223-233 246-248 250-259 261-266 318-320 360- 361 368-374 387 389-396 432 448-454 456 476-479 488 495-497 501-504 506 514-515 517 525-526 533-535 538 545-546 552-554 586-593 595-596 607-612 645 649 658 663-664 670-671 686-688 690-691 704-706 708 710-719 732-741 743 753 757-764 766 771 780-781 822 844-845 856 884-885 900 902 919-921 929 949-950 954 973-976 978-985 988 994 1005 1024-1028 1031-1035 1049 1054-1055 1065-1067 1087-1088 1090-1094 1115 1120-1121 1123- 1125 1127-1128 1133-1135 1156-1160 1174-1175 1183 1192-1196 1198-1201 1204 1210 1221-1225 1227 1231-1232 1264-1265 1279- 1281 1284-1285 1314-1316 1334-1336 1355-1359 1361-1363 1365- 1368 1371 1380 1382-1384 1391-1394 1402 1410 1422 1424-1426 1428 1430 1448-1449 1451-1456 1462-1465 1486-1488 1498 1501 1503-1504 1506-1507 1510-1513 1543-1547 1552-1559 1561 1572- 1578 1587-1588 1595 1611 1640-1641 1648-1653 1680-1684 1686- 1689 1703-1704 1706-1709 1711-1713 1737 1739-1740 1782-1789 1807 1820 1827 1836-1837 1839-1842 1862-1863 1872-1873 1881 1892 1895-1901 1904-1905 1914 1925 1935 1975 2010-2011 2013 2024-2033 2035-2036 2039-2040 2081-2086 2088-2091 2110-2112 2128-2129 2131-2134 2143 2147-2152 2171-2174 2188-2195 2197- 2199 2204-2205 2207-2208 2230-2231 2234-2238 2240-2242 2285- 2286 2288-2294 2345-2349 2352-2356 2359-2361 2374 2385 2387- 2394 2396 2407 2412-2423 2425-2427 2429 2437 2439-2444 2448 2454 2459 2464-2465 2470 2482 2490-2491 2504 2511 2515-2516 2518-2527 2558-2562 2595-2597 2607-2611 2613-2615 2617-2626 2628-2631 2635-2636 2641-2642 2668-2670 2682-2686 2688 2690- 2693 2708 2718-2721 2723-2725 2729 2738 2742-2743 2746 2757 2764 2767-2768 2772 2781-2783 2785-2786 2798-2804 2808-2812

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thyroid gland	Clontech	THR001	28-29 44-45 55 144 178-179 205-206 229-233 246-267 269 280 318- 320 323-327 332 334-337 340-341 349-354 356-361 365 367 374 376 378-381 385-387 389-398 400 408-409 428-432 434-443 445- 449 461-465 467-468 476 478-479 514-515 517 522-526 528-529 536-540 550 552-554 559-560 562 574-582 586-593 595-596 602 607-612 617 622 624 630-633 635-640 645 647-649 654-655 657- 658 666 668 670-676 685 704-707 710-719 722-723 747 753 768 770-772 774-775 780-782 840-845 851 854-856 858 872-874 878 880-881 884-885 900 902-909 911-912 914-917 923-927 929 938- 943 954 963-965 967-970 973 979 999-1000 1002-1003 1005-1009 1015-1020 1031-1035 1037-1040 1042-1043 1054-1057 1063 1068- 1069 1072 1081 1083 1087-1094 1100-1103 1110-1112 1115 1119- 1123 1129-1130 1136 1140 1165 1167-1173 1176 1183 1192-1196 1204 1210 1213-1214 1216-1218 1228-1230 1236-1237 1246-1249 1257 1283 1291-1293 1303-1304 1314-1317 1319 1322 1328-1331 1341-1344 1349 1355-1359 1361-1363 1370 1372-1375 1382-1390 1395-1399 1404 1411-1413 1415-1419 1424-1426 1446-1449 1451- 1456 1458-1460 1462-1465 1476-1477 1486-1488 1498-1499 1503- 1504 1506-1507 1510-1513 1515 1536 1538 1562 1565-1566 1580 1591 1595 1601 1603 1611 1627 1653 1657-1663 1679 1690-1693 1695-1696 1698-1699 1701-1706 1711-1713 1716 1727 1730-1731 1738 1750 1755-1760 1762-1763 1772-1773 1775-1777 1779 1781- 1790 1792-1794 1796-1797 1820 1825-1831 1843 1845 1857 1871 1877-1880 1882-1887 1895-1901 1904-1905 1911-1918 1922-1929 1931-1935 1962 1974 1992-2000 2002-2008 2010-2011 2013-2022 2024-2033 2035-2036 2039-2040 2081-2083 2085-2086 2088-2091 2102-2109 2114-2117 2136-2138 2143 2147-2156 2158-2159 2162- 2163 2171-2174 2181 2188-2195 2197-2203 2209-2214 2216 2218 2220-2223 2225-2227 2229-2238 2240-2242 2251-2252 2254-2263 2266-2281 2289-2294 2328 2330 2332-2339 2341-2344 2350 2352- 2356 2359-2361 2371-2372 2375 2381-2384 2386 2391-2394 2425- 2428 2430-2432 2435 2439-2444 2449-2454 2464-2465 2476-2478 2480 2490-2491 2507 2512-2514 2529-2531 2533 2535-2538 2540- 2543 2551-2554 2563-2565 2569-2571 2576-2577 2584-2598 2600- 2601 2629-2631 2635-2636 2639-2642 2672-2676 2679-2682 2695- 2697 2708-2709 2716-2717 2750-2756 2758-2760 2763-2764 2767-

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trachea	Clontech	TRC001	19 54 56 178-179 360-361 365 367 450-454 456 484-485 500 586- 592 603-604 606 613-614 616-617 657-658 663-664 674-676 747 782 837 872-874 893-895 914 938-943 980-985 1070-1071 1101- 1103 1115-1118 1137-1139 1141-1145 1156-1160 1174-1175 1219- 1220 1236-1237 1291-1293 1303-1304 1338 1411-1413 1419 1424- 1427 1450 1461 1472 1604-1606 1621-1622 1694 1697 1796-1797 1845 1856 1990 2010-2011 2013-2015 2102 2118 2120-2123 2136 2155-2156 2158-2159 2220-2223 2289-2294 2345-2346 2350 2363- 2365 2439-2444 2492 2498-2499 2555 2557 2580-2583 2585-2586 2588-2589 2612 2632-2634 2674-2676 2694 2744-2745 2774-2776 2830-2833 2982-2987 3024 3035 3039-3040 3095 3097 3116-3117 3159 3170 3181 3183 3212 3222 3233 3262-3264 3313 3322 3332- 3333 3491-3493 3520 3682 3732 3799 3815 3968 3978 3987 3997 4006 4114-4120 4135 4138-4142 4144-4146 4183-4185 4207 4209 4232 4237 4243 4249 4273 4287-4288 4373-4374 4380-4382 4422

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uterus	Clontech	UTR001	2 30 74-76 110 155 166 213 221 233 318-321 323-325 335-337 411-420 422 477 488 514-515 517 528-529 555-556 584-593 595-596 618-620 647-649 659-662 769 840 854-855 858 880-881 896-900 902 915-917 923-927 973-976 978 1018 1024-1028 1056-1061 1063 1072 1082-1083 1089 1096-1100 1111 1115 1122 1124-1125 1129 1131 1140 1166 1176 1183 1185-1190 1194 1202-1207 1284-1285 1303-1304 1355-1359 1361-1363 1395-1399 1423-1426 1476-1477 1505 1525 1611 1642-1643 1648-1652 1674 1676-1678 1690 1701-1702 1719-1725 1741-1745 1765-1767 1775-1777 1783-1789 1796-1797 1825-1826 1828-1831 1862-1863 1930 1992-1995 2010-2011 2013 2081-2083 2136 2153-2154 2177-2178 2180 2216 2218 2371-2372 2375 2381-2382 2428 2430-2432 2436 2438 2500-2502 2528 2539 2545 2556 2564-2565 2567 2572-2574 2585-2586 2588-2589 2682 2713 2774-2776 2781-2783 2785-2787 2795 2910-2914 3095 3226 3236-3237 3265 3328 3330 3347 3443 3485 3499-3501 3524-3525 3527-3529 3568-3571 3585-3586 3683 3758-3759 3761 3821-3822 3950 4024-4025 4147-4149 4172-4173 4176 4264 4287-4288 4298-4301 4303 4357 4368 4373-4374 4379 4392-4395 4424 4465 4473 4490 4575 4577-4579 4616-4617 4667 4673-4674 4747 4796-4797 4856-4860 4897 4978-4980 5078-5081 5099-5101 5138 5155 5204-5205 5207 5236-5238 5240 5376-5380 5401-5404 5406-5407 5418 5428-5430 5462-5463 5833-5834 5918-5919 6022 6025-6029 6055-6056 6058-6060 6069 6189 6245 6251-6252 6368-6369 6412 6545-6546 6675-6676 6732 6772 6983 7179-7180 7271 7326 7400-7405 7437-7438 7462-7465 7494 7504 7515 7526 7535 7546 7558 7569 7814 7829 7839 8034-8035

TABLE 2

SEQ ID NO: of nucleotide sequence	SEQ ID NO: of peptide sequence	Met h o d	SEQ ID NO: in USSN 09/577,408	Nucleotide location corresp. to first residue of peptide sequence	Location of first nucleotide of codon corresp. to last residue of peptide sequence	Amino acid sequence (X= Unknown; *=stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)
1	8052	A	1	2	424	
2	8053	A	10	67	373	FCDCHHFI LMFKSPHIWVPVGIFSSWLLCF FWAC LHHSLSIALLSCTKRYSGLILYFLC SSFEITVSSKSSVSF*RRMVFRNQVLGSR CACCC*GVAAPRPFP
3	8054	A	100	404	1072	ARACKIPNTASDRPII VALQRKRSSPKMT QSAAGTCPTSCMIK/IDSHKCGDDRELFA QAPVDQFPGTAVESVTDSSRYFVIRIEDG NGRRAFIGIGFGDRGDAFDNFVALQDHF KWVKQQCEFAKQAQNP DQGP KLDLGF KEGQTIKLNIANMKKKEGAAGNPRVRP ASTGGLSLLPPPPGGKTSTLIPPPGE/PVG CGGIPRPASSCSQFRSTSSQTQPGTGW
4	8055	A	1000	2	333	ACPFNKSAEDLLNL/RQGLTAGQLPFLP WWNIVLDSP/SLTSIPATSFSTSLATARAR SASEVPIWKTLFCSLSQVRKTTTRSSGAT KSTVLSTSLTLLH*ILRSISSQ
5	8056	A	1001	292	945	
6	8057	A	1002	46	493	
7	8058	A	1003	2	406	
8	8059	A	1004	192	548	
9	8060	A	1005	1	528	DNELLDYEDDEVETAAGGSMS/EAPAKK DVKGSYFSIHSSGFRD FLKPELLRAIVD CGFEHPSEVQHECIPQAILGMDFLCQAK SGMGKTAVFVLATLQQLPVTGQVSVL VMCHTRELAFQTR*KTRPFWNVTVCPSG EDTRVGVKETLLPPPLTAPTWPWLP SFASP PLLNPHF
10	8061	A	1006	807	1034	
11	8062	A	1007	136	1520	LFTPCFHLFCENPSRSPFPSSPAGPVMAE NDVDNELLDYER*MRWETAAGGDGAE APAKKDVNGLLCLPSHSSGFRD FLKPE LLRAIVD/CGFEHPSEVQHECIPQAILGN GMSCARAKSGGERQAVFVLATLQQLP PVITGQGV CAG*CCHTRELAFQISKEYER FSKYMPNVKVAVFFGGLSIKKDEEVLKK NCPHIVVGT PGRILALARNKSLNKHKHKH FILDEC DKMLEQLDMRRDVQEIFRMTPH EKQVMMFSATLSKEIRPVCRKFMQDPM EIFVDDETKLT LHGLQYYVKLDNEKN RKLFDLLDVLEFNQVVIFVKS VQRCIAL AQLLVEQNFP AIAHRGMPQEERLSRYQ QFKDFQRRILVATNLFGRGMDIERVNIAF NYDMPEDSDTYLHRVARAGRFGTKGLA ITFVSDENDAKILNDVQDRFEVNI SELPD EIDISSYIEQTR
12	8063	A	1008	92	191	
13	8064	A	1009	219	422	
14	8065	A	101	2	477	IVSPEVRWAPGVAMEESGYESVLCVKPD VHVYRIPPRATNRGYRAAEWQLDQPSW SGRLRITAKQMAYIKLEDRTSGELFAQ APVDQFPGTAVESVTDSSRYFVIRIEDG NGRRAFI*IGFGDRGDAFDNFVALQDHF KWVKQQCEFAKQAQNP DQG
15	8066	A	1010	215	416	
16	8067	A	1011	261	486	GFLGKVLQSPATTVVRTLNDRSSIVMGE PISQSSSNSQ*FFFFKENSRI LFC LG*CAVE QHFS SIFHCVD FYII

17	8068	A	1012	31	2697	
18	8069	A	1013	306	439	
19	8070	A	1014	149	404	
20	8071	A	1015	2	343	
21	8072	A	1016	172	341	
22	8073	A	1017	73	408	
23	8074	A	1018	53	237	
24	8075	A	1019	51	480	
25	8076	B	102	118	419	XLFCVDIDECSIMNGGCETCTNSEGSYE CSCQPGFALMPDQSRCTDIDECEDNPNIC DGGQCTNIPGEYRCLCYDGFMASEDMK TCVDVNECDLNPNICLX*
26	8077	A	1020	49	399	
27	8078	A	1021	564	651	
28	8079	A	1022	2	366	SLPASDRPPISSPLATSGTIFSAISCFWDLF APFLWLAPSCOPTMSSQIRQNYSTDVEA AVNSLVNLYLQASYTYLSLQDIKKPAED EWGKTPDAMKAAMALEKKLNQALLDL HALGSART
29	8080	A	1023	18	781	EICPSRPKNSARRGGPAGLSLASTVFGRN RSGDWASSLRPPSDFLLRLQPPGPSYRPS PASGTCQHRFLWLAPSCOPTMSSQIRQ YSTDVEAAVNSLVNLYLQASYTYLSLG FYFDRDDVALEGVSHFFRELAEEKREGY *RLMKMNQVRGGRALFQDIKKPAEDEW GKTPDAMKAAMALEKKLNQALLDLHA LGSARTDPHLCDFLETHFLDEEVKLIK MGDHLTNLHRLGGPEAGLGEYLFERLTL KHD
30	8081	A	1024	217	608	
31	8082	A	1025	147	430	
32	8083	A	1026	489	700	
33	8084	A	1027	899	1097	QPAGPSLTRCATAQALCTTLPPCCLVKQ DGSTIHRYREPR/QQCWRMPIDLDLSP EERRARLRKR
34	8085	A	1028	59	426	
35	8086	A	1029	1	2148	
36	8087	A	103	59	450	CLGVTVKDVNQEFVRALAAFLKKSG KLKVPEWLDTVKLLAKHKELAPYDEN WFY/SREFVRNLASTARHLAYLRGGRWG LAPLTKIYGGDVQRKRAFIAPAFSRGSK SVARRVLQALIEGLKMVEKDQD
37	8088	A	1030	193	564	GDSGGSPWPDEKPKGVKTENNDHINLK VAGQDGSVVQFKIKRHTPLSKLMKAY CEARQGLSMRQIRFRI*PGNPIHETDTPAP VGKWKDERYQLMVFPQARPGGVYLKK GTCFFYSKNSVSF
38	8089	A	1031	216	372	
39	8090	A	1032	566	787	
40	8091	A	1033	2	401	
41	8092	C	1034	379	453	
42	8093	A	1035	2465	2795	
43	8094	A	1036	1264	1385	
44	8095	A	1037	1249	1457	
45	8096	A	1038	146	438	
46	8097	A	1039	2	2387	
47	8098	A	104	583	1526	PHLILQVTKAMCPFESGRESFLVVSICIYF KPDSSASFSFPDPYSVQC*PQLEPPPHCST SIYFPK/PTLPHIPFPPLTKHPKEDLELA GWTSSGCFYFSLPSTKLGENWSLHPQSH VYRSGDLVGSF*LLSQKLHRNPSICSL KGPPPREGLGNDPVSTNTAPYPRNLP*DL QRTIFSSSIFYPGPPGAPSGES*NP*ELEG ILEVF*LELCPT/VH*HQPGLVFPPPSGLF SSFPPQKILTHRFLLVQASKPTPLRLC PI.WSPSHYPSSI.APSSSI.EFGPGSPOKTI

						PLWSPSHYPSSLAPSSSLEFGPGSPQKTL E*PPLPKKQTD RHAPGPE
48	8099	A	1040	1	1329	
49	8100	A	1044	3	581	
50	8101	A	1045	1	741	PLTRAAGIRHEDSQSVGNSSPEIPVLPEPA YQLGPLCQVLP RRAGSSCLPVMTRTVKL WDKSSRECVHSYCEHGGFVTYVDFHPS GTCIAAAGMDNTVKVWDVRTHRLLOH YQLHSAAVNGLSFHPSGNYLITASSDSTL KILDLM EGRLLYTLHGHQGPATTVAFSR TGEYFASGGSDEQVMVWKRNF DIGDHG EVTKVPRPPGT LASSMG NLTVSILEQRLT LTEDKLKQCL ENQQ LIMQRATP
51	8102	A	1046	526	1272	
52	8103	A	1047	57	307	
53	8104	A	1048	1669	1820	
54	8105	A	1049	212	547	
55	8106	A	105	1283	1648	SSGASVAPTSWTSNRFPF*SWVPSSF*RT HGPRPSGPPRERKPRAPGQEPKGT PRES VCLNDLPCPGLLGICRPILQTSP/CHGHH GILSVNV LKGD KPSRSLGLPVFHNH HFRDLSVL
56	8107	A	1050	670	1296	
57	8108	A	1051	243	335	
58	8109	A	1052	1	1170	
59	8110	A	1053	1	1122	
60	8111	A	1054	1	392	
61	8112	A	1055	47	296	
62	8113	A	1056	1	315	
63	8114	A	1057	1	579	
64	8115	A	1058	87	507	
65	8116	A	1059	866	1002	
66	8117	C	106	263	304	MLKLSVRNRETFL*
67	8118	A	1060	385	573	
68	8119	A	1061	328	530	
69	8120	A	1062	6	664	LPGRPTRAPTRPAEHSIVGTRLVSCQLQP SQPNADQGKLT TMRIAVICFLLGITCAI PVKQADSGSSEKQLYNKYPDAVATWL NPDPSQKQNL LAPQTLPSKSNESHDMMD DMDEDDDDHVDSDSIDSNDSDDVDD TDDSHQSDESHHSDESD ELVTD FPTDL PATEVFTPVPVPTVD TYDGRGDSV VYGLR SKSKKFRRPDIQYPDATDE DITS
70	8121	A	1063	2	613	PRVRPRVREEAEHSIVGTRLVSGQLQPSQ PNADQGKLT TMRIAVICFLLGITCAIPV KQADSGSSEKQLYNKYPDAVATWLN DPSQKQNL LAPQNAVSSEETNDFKQETL PSKSNESHDMMDMDDEDDDDHVDSD DSIDSNDSDDVDDTDDSHQSDESHHSDE SDELVTDFPTDL PATEVFTPVPVPTVD TY DGRGDSVG

71	8122	A	1064	1	1073	TDCRVDPVRPRVRVEHSIVGTRLVSCQ LQPSQPNADQGKLTMMRIAIVICFCLLGIT CAIPVKQAESIGSSEKQLYNKYDPAVA TWNPDPSQKQNLAPQVTLPSKSNESH DHMDMDDEDDDDHVGTDARDSIGLG TTLDGCRMDTGWIFHQF*WSLHHFWME SGWNWSLDFSPRDLAQATEVFQFQFVP TVDTYDGRGDSVVYGLRSKSKKFRRPDI QYPDATDEADITSHMESEELNGAYKAIP VGPDPAAPSDWDSRGKDSYETSQLDDQ SAETHSHKQSRLYKRKANDESNEHSDVI DSQELSKVSREFHSHEFHSHEDMLVVD KSKEEDKHLKFRISHELDSASSEVN
72	8123	A	1065	1	1128	LETPIDSPNRNPGNPGATHASGRRQSTAS SGPDSVSGQLQPSQPNADQGKLTMMRIA VICFCLLGITCAIPVKQADSGSSEKQLY NKYPDAVATWLKP*PIFRRQNLLGPTW LCPLKETNDFKQGGPFPS*GPTERPWT WDDMG*WKVDGWTMWDSQDSIDSND SDDVDDTDDSHQSDSHHSDESDELVT GFSTDLPATEVFTPVVPTVDTYDGRGDS VVYGLRSKSKKFRRPDIQYPDATDEHITS HMESEELNGAYKAIPVAQDLNAPSDWD SRGKDSYETSQLDDQSAETHSHKQSRL YKRKANDESNEHSDVIDSQELSKVSREF HSHEFHSHEDMLVDPKSKKEEDKHLKF RISHELDSASSEVN
73	8124	A	1066	514	1000	
74	8125	A	1067	1	1098	
75	8126	A	1068	2388	2658	FYKVTFMWKSKVKS LGDNFVLGSVVP FLFFFFFFLRLSLALLPRLECSGAISAHCI LCLPGSSNS/PASASQVVGITGTCHHAWL IFLYF
76	8127	A	1069	788	1000	
77	8128	A	107	426	1519	AWRRRRSGTSGKATWWCSGLRRASPTP SRRVQSWATAVMWKPSPPSSPASWE/PA LPREPHRAVSEQRQ*GR*PCKPELTAPLC LEPVHRPEGPMGT/YSRCCLSPHHRP/PGP VGTFPV/SPEPVHRPQDPWHIPGVPEPVH RPQDPWHIPGVPEPVHRPQDPWHIPGV EPVHRPQDPWHIPGVPEPVHAPTGPVAL ASVGASSRDGLLPAHAACTLHETAGQ TRTSRLSPS*GLGLPFCSRRSRQPWTPAL GHSKTSGEWRGGARPGPCGC*CCMLSPT QQPLPGGHPQRARASPRAGEG*TSRAYL AVHAAATLWKLPLPEDPPPLLDARISAH RPLCPSGRHRKVSLFLTLFSISCEARKIG
78	8129	A	1070	306	1195	
79	8130	A	1071	3	715	FVAHTKGVRGLPSMRRSPDCGRMELAA GSFSEEQFWEACAEQQPALAGADWQL LVETSGISYIRLLDKKTGLYEYKVFVLE DCSP TLLADIYMDSDYRKQWDQYVKEL YEQECNGETVVYWEVKYFPMSNRDY VYLRQRRDLMEGRKIHVILARSTSMQ LGERSGVIRVKYKQSLAIESDGKKGSK VFMYYFDNPGGQIPSWLINWAAKNGVP NFLKDMARACQNYLKKT
80	8131	A	1072	1	1128	
81	8132	A	1073	3	862	
82	8133	A	1074	1	912	MTDNILELAQNMDKYTKYEMTTTSILSQ PSSSQREQDQGQFQELTVTSEMFRKGKG SFCSHPHPEKFLRTFNEIETYLIGNFQDLE LESSDDLPRGCTNEKARKTYDPKKLPLP YT/VRPCWILASKLHI*ESYG*RQ*A**CH Q*TPWPRPVWWSLHTEAHEIWCRRSDQ GTSLGRSIPCPPVLC*ERSTYDLRPQTD QPSKHLTNLKSASTPPYPNPFITSPPHTRS GLQFRSTSSPPAPAQFTLKKVAEAKGIV KVNAPFSI.SDI.SOISVRI.GSFIKYEKSSPV

						KVNAPFSLSDLSQISVRLGSGFIKYEKSSPV HGSFGSNPETLYSPRP
83	8134	A	1075	611	817	
84	8135	B	1076	1	1500	MRTREVSITGADFTALLVDIIGNSTSYLT EIFKSTSILSVNQSNESDCIFICVMTGKSG RNLSDFWIEEEKYPIINYTFTSGLSGVLAL LLTQSLFGGLFTRTRMKFGAVTRIGGPPL GNQSPSSCSLLHEKDPPTTSGPQTDQPKK HLTNFKSGTEAMNTTSLAPAAEIMAT PGSPSQASPTSGAFTHGTQTPSPTKATAP RYPQTGAQSRPRRFRPPAGAAPKAAA PRHPHPRGTAPPPRRISPESIRPHPPPLDR GPRPPVTPFLIVLGCLILAVLTFKEYETV SGDWLLLLLETFIFIGAFAFALRIWAAGC CCRYKGWRGRLKFARKPLCMLDIFVLIA SVPVAVGNQGNVLATSLRSLRFLQILR MLRMDRRGGTWKLLGSAICAHSKELITA WYIGFLTILSSFLVYLVEKDVPEVDAQG EEMKEEFETYADALWWGLITLATIGYGD KTPKTWEGRLIAATFSLIGVSFFALPAGIL GSGLALK*
85	8136	A	1077	606	1065	LVARTERLSVSQGFPLPWCTGRIRSHVGL ENECKVLLSGSSSQKMGKPEGRWFSPGV GPPPCLAAPALLRLPWKSPPHPTGGWPA SVPVPVGVLCQAPLDDQLLVCWPAR VLEKRYWQPPLS*LCPSCAHMNGYGS GAYVWVLTELTVDFAFWA
86	8137	A	1078	1	822	MWNAVTLWQRESCIEESEIGTLETKE THFIRGPKTLAPVTDWEGSLPLVFNQCR DASLIHPRFKGFRPRRDACLGSPPLAASP AFLGKGQAAPRQAEFGPNSSSASAPPPY NPFITSPHPTWSGLQFHSMTSPPPAQF PLKKVAGAKGIVKRLKTDARLPWKPP DHHRRRASGNSHSGRVQPP/CPAAVFGS C*VSQAFFGARCKLSVDLPFDLEDVRV FMCVRVKRPPNRLCVSNMAVYFTWVQL LQAIWAYTCKSQGMRWLGLGSEA
87	8138	A	1079	38	639	MTLIKSPIVIWTIRSRLKWSQMEMRNLL GTGAKRQRHVLSVDPKLRRWSRTGKA AFPWCLIIAGRPALVLHP*QVLLSWGR GKI*LTSPSRCTIIEKSCNSWPPL*DKPQP HLQHTRTSKRLNRSGQAFQLNLLPQELA TSTRN/PDHAQACECLOPRIPKPCICAGP HWKLCSTHLAATPRAPGTLAQGLTDS FSA
88	8139	A	108	1	537	RRCCCRHTRSPCLALLLEIVSLFSFAVPQ SPDSSPLVFTYFARTHDPDPSLLPLPAQL WQRTMWTMCLLDYER*MRWETAAGG DGAEAPAKKDVKGSYVS/LSHSSGFLDF LLLL*VLPSIVHCAFEHSTHFRHECISQAI LGKDALFPALLDIFLTGVFFLTIFSPVLRV LLRCLFCLS
89	8140	A	1080	1	1611	

90	8141	A	1081	17	1173	MADSRKRTWMRMKFGAVTRIGGTS LG RSIPCPPALCSVKIHLRPRVLRPTSPRNI SPILN/TARFKRIKACYYS PATAWPFKAY KLPLQFPHT/WS*NQTRLTA*FS*KHTCS P*LSSPANLPNPNPFYKTTTPFLPRHG**G QILTQELGPRPIAFLSKQLDLTVLTQPS LHAAAAAALILLKALKITKYAQLTLYSS HNFQNLFS SYLMHILSAPWLLQLYSLF VESPTITIVPGTDFNPASHIILDTPDPHD CISLIHLTFTPFPRISFFPVPHPNHIWFIDG SSTRPKCHSPAKAGYAIVSSTSIEATALP PSTTSQQAELVALTQALTLAKGLCVNIY TDSKYAFHIVHHHARSFLTQKGSSINPS LIKTLNAA
91	8142	A	1082	324	548	SFYHLPSSHVLLTVSFRD*PSPTCPAIYS *KGGWSQRHSQGACYKCQKSGHWAKE CPQPRIPKLRPICVGP
92	8143	A	1083	760	1260	HTDGVLVWMSFLFVSFSPNSQDPQLQLC WSLLEVHSRSCLPGYQQWRLSWKCRNH SSSASLTLRAVDWCSYSAILEPRWYCL LYFIQSILKKHRGRRWIFLMEQRTGGQR IDLPRGGPI*VTAPNLMHVRVKRPPNRL CVSNKAVYFTSKSGPLSQDVVTVVIH
93	8144	A	1084	908	1192	
94	8145	A	1085	1	420	
95	8146	A	1086	287	515	LFTHVSKELATSARNLTTRPRTAGSPGFL LSHVPSVWDPTANRTVQLTWQPLPEPLE VSGPRLSD*LLPRSSRLSG
96	8147	A	1087	1	5127	
97	8148	A	1088	3	721	
98	8149	A	1089	144	408	
99	8150	A	109	1	457	AGGGCSPKGRPEAKSGQRDWELVAGGP PGISRREGTCCSRFPSRLSQPFRSAQQLQ LAASLPANLSNFCQGSEMP TTSRPA LDV KGGTSPA KEDARPEKSTLGQ/YSTLLVID NQVSSKTR*PDESANQYYASDTFIILSRT YNR YILVHLSK
100	8151	A	1090	265	769	RQKRHVLSVDPKLRRWSRTGKAAPWC LIIAGRPALVLHP*QQVLLSWGRGKI*LT SPSRCTIIEKSCNSWPPL*DKPQPHLOHTR TSKRLNRSQAFLQNLPLQELATSTRN/P DHQAKECLQPRIPKPCPICAGPHWKLD CSTHLAATPRAPGTLAQGSLTDSFSA
101	8152	A	1091	69	634	KQKRSTYNLRSSDPPAQETSHQFQIRDK GDTFYLTQNSGAHGLGRQPSLDV*S LQGHLSDYSPMFRCQTMQGRLP*SFTL SGKSRFSGEGASTPQPLLHP*WQVPLFW GRGKYPSTPSSPLVASPAFLGKGQKPPRP SRMP SFG
102	8153	A	1092	1	655	MGATHPFELLTKMTSQGSDISGDLPWEI NPLSSCSLLHEKDPPTSGPQTDQPKKHL TNFKSETKETHFIRGPKTPVLVTDWEGR LPLVFNHSRDASLIHPRFRGVRPRRDAC LGPSPLAASPAFLEEGQVPQLLSMSLTP SLLFWRRGKKPSTPSSPLAASPAFLEEGQ VPQPHIS/GA/LDPLFLHPNLL*LCTPTFP LFWKTVRKYSSNNQKGE
103	8154	A	1093	756	878	LSQWRSDNGPAFISQITQAVSQAPGIQ*N LYIPYHPQSSGK
104	8155	A	1094	781	1194	FPKGGPPI*VIAPNFMVRVRKPPNRLCV SNKAVYFTWVQVGALCRLGA/PAPCIPA APVP/VHGSEGP RYNSSRCLAELKP*ALA ASMWYLSLKALGIESGRVSITAILINISSA RKA/SCVPLGSRILESLMLSTVRALR
105	8156	A	1095	400	686	RQVLLFWGRGKYPSTPSPSPLAASPTFLG QGQELVTSARNLTTRPRNACGPGFLLSH VPSVRDPTGNRTVQLTWQPLPEPLESGP

						RLSD*LLLRL
106	8157	A	1096	1	883	MASSAQLLGSSQETYNHSKRQRGGEMS HMAGARRKRERGEMLHTFKQPDLMRW SSVCRKNKEKVGNSRKRRNVRYCFSRK FNGTSKVFESWQVVVVGEINSHVAHTKP VRWSLHTDAHEIWCRDSDRRTSLGRSIP CPPVLCMSMRKIHLQAQVLRPTSPRNISPL NRRKRRHVLSVDPKLRHRSWTREGSLPL VFNLCRDASLIHPGFRGVRPRRDTCLGP SPLAASPTFLGEGARACYKCQKSGHQAK ECLQPRIPPKLCPAWRDPAGNRTVQLTW QPLPKPLELWPKVL
107	8158	A	1097	2	551	CGKVWNFLETFSMALTKMLIMIWTMKF RLRSSQMEMRNLLGTGISLETWCPAS*P L*P*LKGDKIQLRPWLQRVQGSIGSFQE VLGPVWLRNQELRFGNLCYFAGCMEK PVCPRSLQGGGF/PWYVPVAVVGAK VHDVNLHMLSFPKWKLHTCMKFGAVT WIRGPPLGDQSPVLLLFAP
108	8159	A	1098	1436	1699	
109	8160	A	1099	1099	1250	LVYLKVTGRMEPSWKTLCRILSRRTSPI* QGRPTFRFRKYREHHKDTPRD
110	8161	A	11	366	795	AWVEQSKVLIKEGGIQLLLTIVDTPGFGD AVDNSNCWQPVIKYFDSKSQDYLNAAES QVNRQMPGNRVHCCLYFIAPSGHGPL HN*RLPPSGRIG*YMFVTTWHCLLLRLK PLDIEFTKHLHEKVNIPLIAKADTLMPEE C
111	8162	A	110	232	376	FPTTKSLG*DSFTSEFCQTFKAELIPILS/R LFQKLEQYVTLPPYFYE
112	8163	A	1100	303	1413	VRRQRSDRERSDARMVRFCLYM*RKN PFILH*LFR*TLRQTKPDSSA/V*MCQNL MTHSKSTEWKITK/QIFDGDGKTYQNVQ QFIDEGNYTSGDNHTLRDPHYVEDKGH KYLVEANTGTENGYQDSAHLHPGEINS HVAHTKPVWWSLHMDAHEIWCRDSDR GTSLSGRSIPRPALCSVRKIHLQPQVLRPT SPRNISPISNPGFCFRNHHQTGFSPAGA NQRGPLAATLSGPGGEGQSAVARLTGE KKNHPGAQYANRLSPRVGRFINAAGTT GFPTGKRAVSATQLMDFADFGTTTKQD FRLLGQTSVDRLLQLSQQAQVGNQLLP VSLVKRKTTAPNTQTASPRALADSLMQ LARQVSRLESGQ
113	8164	A	1101	846	1825	
114	8165	A	1102	2141	2384	AEQWPSVKILRQELATSARNLATRPRNA RSPGFLSCVPSVWDPTGNQTVQLTWQP LPEPLESGPRLSD*PLPRCSRLSS
115	8166	A	1103	305	1148	
116	8167	A	1104	2779	3182	DKTQPHLLHTGTSKCLNCSGOAFLQNL LQELATSARNLATRPGNSCSPGFLSHVP SVPDPTGNRTVQLTWQPLPEPLELWPKV LSRVMDYI*MVY*STIPQNSAIVLTDLLL GVYIPSESKHARPKVVLWAH
117	8168	A	1105	2286	4921	
118	8169	A	1106	1	761	
119	8170	A	1107	1	969	

120	8171	B	1108	1	2175	MVNPDGYINYDQLEENARLFHPKLIH GTSCYSRNLEYARLRKIADENGAYLMA DMAHISGLVAAGVVPSPFEHCHVTTTT HKTLRGCRAGMIFYRKGGMAPLGTATL LQALFSLFLSKSRDVPGTGADPGVMYV KRRPRGTDSGCGVLEPRRFLPSGMAFTK EEEEEEEPYNEPALPEEYSVPLFPFASQG ANPWSKLSGAKFSRDFILISEFSEQVGPQ PLLTIPTNDTKVFGTDFDLNYFSLRIMSVDY QASVFGHPPGSAYPKLNFVEDSKVVGLD SKEGAFAYVHHLTYDLEARGFVRPFC MAYISADQHKIMQQFQELSAEFSRASEC LKTGNRKAFAGELEKKLKDLDYTRTVL HTETEIQKKANDKGFYSSQAIEKANELA SVEKSIIEHQDLLKQIRSYPHRKLKGHDL CPGEMEHQDQASQASTTSNPDESADTD LYTCRPAYTPKLIKAKSTKCFDKKLKTL EELCDTEYFTQTLAQLSHIEHMFGRDLC YLLTSQIDRALLKQGHITNLFEDFVEVD DRMVEKQESIPSKPSQDRPPSSSLEECPI KVLISVGSYKSSVESVLKMEQELGDEEY KEVEVTELSFDPQENLDYLDMDMKGSI SSGESIEGLGTEKSTSVLSKSDSQASLTVP LSPQVVRSKAALLQHPNPHRLRSSSM EYKDPDPPHRFSEPWPNEPEANLSSPAVK DSVTKELOQTARPSREQT*
121	8172	A	1109	2	964	DIIPLMVNPDGYINYDQLEENARLFHP KLIHAGTSCYSRNLEYARLRKIADENGA YLMADMAHISGLVAAGVVPSPFEHCHV TTTTTHKTLRGCRAGMIFYRKGVKSVG SPRLGKEILYNLESLINSAVFPGLQGGPH NHAVAGVAVALKQAMTLEFKVYQHGV VANCRALEALTELGYKIVTGGSDNHLI LVDLRSGTDGGRAEKVLEACSIACNKN TCPGDRSALRPSGLRLGTPALTSRGLLEK DFQKVAHFIHRGIELTLQIQSDTGVRATL KEFKERLAGDKYQAAVQALREEVESFA SLFPLPGLPDF
122	8173	A	111	515	909	LPLFIMNMTVELVWPDTTSNLPRNSEILS SPTRPNQLFVCLFLGSPSLPRLEYKWYSQ SSL*PQNPGLK*SSPSASYVAKTTDMCH HAWLIFLFLQTEGLNYIAQVG/VQTPGF KQSSCLTLPKC*DYRHEPP
123	8174	A	1110	172	375	
124	8175	B	1111	827	1276	MATAAWSSSLEKSYELPDGQVITIGNER FRCPETLFQPSFIGMESAGIHETTYNSIMK CDIDIRKDLYANNVLSGGTMYPGIADR MQKEITALAPSTMKIKIIPPERKYSVWI GGSILASLSTFQQMWISKQEYDEAGPSIV HRKCF*
125	8176	A	1112	144	261	
126	8177	C	1113	122	253	MGWVGATSPHPVAWRTRRPSSLRSLPS VRALVVRTERRVPCG*
127	8178	A	1114	50	368	RQAILTAAPRRAAARA AVRSRHGGARA LSPGMEQRRRRVTTWSLLQPRPRRWA ARRPRGRRQA VARRTARRICPCGRPPV RAPAADPWARRAWSTSRSPAGTE
128	8179	A	1115	336	689	
129	8180	A	1116	164	370	
130	8181	A	1117	974	1111	
131	8182	A	1118	179	404	FSSSIGSLRRQRRGMKTPFGKAAAGQRS RTGAGHGSVSVTMIKRKA AHKKHRSRP PSQPRGNIVGCIIQHGWKDG
132	8183	A	1119	1	1698	
133	8184	A	112	40	351	LKIPMQFLHSGFWFSFFVFFGF*KFGFGP QGGRRQGGANKTKGEKLPGSSSLPGPNP QENREKKGPPKTLKKFGNLSSSGGKTRG

						PRGEKNSDPKGTGPGQNPNGN
134	8185	A	1120	264	799	
135	8186	A	1121	231	351	
136	8187	A	1122	1	3654	
137	8188	A	1123	1376	3462	TKPKTKTTLLSQ*MQKKPLTKFNNPSC* KLSIN/IVLEVLARAIRQKKEIKGIQLGKE EVKLSLFADDMIVYLENPIVSAQNLLKLI SNFSKVSGYKINVQKSQAFLYTKNRQTE SQIMSELPFTIASKRIKYLGIQLTRDVKDL FKENYKPLLKEIKEDTNK WKNIPCSWVG RINIVKMAILPKVIYRFNAIPIKLPMTFFT ELEKTTLKFIWNQKRARIAKSILSQKNKV GGITLPDFKLYYKATVTKTAWYWYQNR VIDQWNRKEPSEITPHTYNYLIFDKPEKN KQWGKDSL FNKWCWENWLAICRKLKL DPFLTPYTKINSRWIKDLNVRPKTIKLE ENLGITIQDIGMGKDFMSKTPKAMATKA KIDKWDLIKLSFCTAKETTIRVNRQPTT WEKIFTYSSDKGLISRIYNELKQIYKKK TNNPIKKWVKDMNRHFSKEDIYAACKH MKKCSSSLAIREMQIKTTMRYLTPVRM AIIKKSNNRQTGSGVDLQTPDCLKLR DLTVRRKMNKQKEIASTSTKRTSTPNPT CRSVGPKDCSSLGAMEQSWTENDFDKL TEKKALEENQEEMDKFLDTYTLPRLNQE EVESLNRPIGSEIEAIDS IPTKKYPGPDG FTAKFYERIKVFCTESLAKWIKWTHTKT FIMEFHTIGNAKILQASSFEVKTCTKTL EHKRLESIMALTSQ
138	8189	A	1124	485	2347	TEPKTKTT*LSQ*MQKRPLTKFNNTSC*K LSIN/IVLEVLARAIRQEKEIKGIQLGKEE VKVSLFADDMIVYLENPTVSAQNLLKLI GNFSKVSGYKINVQKSQAFLYTNNRQTE RQIMSELPFTIASKRIKYLGIQLTRDVKDL FKENNKPLLKEVKEDTNEWKNIPCSWV GRINIVKMAILPKVIYRFNAIPIKLPMTFF TELEKTTLKFIWNQKRACIAKSIFSQKNK AGGITLPDFKLYYKATVTKTAWYWYQN RDIAQWNRTEPSEIMLHIYNYLIFDKPEK NKQWGKDSL FNKWCWENWLAICRKVK LDPFLTPYTKMNSRWIKDLNVRPKTIKT LEENLGITIQDIGVGKDFMSKTPKAMAT KAKIDKWDLIKLSFCTAKETTIRVNRQP TTWEKIFATYSSDKGLISRIYNELKQIYK KKTNNPIKKWAKDVNRHFSKEDIYAAK KHMKKCSSSLAIREMQIKTTMRYHLTPV RMAIIKKSNNRRIQ/GGIWCDRIL*R*TT CRVAKEIQSL*RRJ/WKRLQRTLSIPVLD V*PPMF*ASVIDTMTI*CFEARDTCFTLTL ESFWDMMHRCLAASKGIGLLC*PLIWHM SLMGVKSPPFVFSCLWTSVRPTT
139	8190	A	1125	1	2784	
140	8191	A	1126	1	3000	
141	8192	A	1127	1	3045	
142	8193	A	1128	1	2736	MIISIDA EKAFGKVQQPFMLQTLNKL GID GSYLKIIRAVYDKPTANITLNGQKLEAFP LKTGTRRGCPSPLLFNIVLEVLARAIRQ EKEIKGIQLGKEEVKLSLFADDMIVYLEN PIVSAQNLLKLISNFSKVSGYKINVQKSQ AFLYTNNRQTESQIMSELPFTIASKRIKY LGIHLTRDMKDLFKENYKPLLNEIKEDT NKWKNIPCSWVGRINIVKMAILPARNAI PIKLPMTFFTELEKTTLNFIWN/Q
143	8194	A	1129	1	2955	

144	8195	A	113	307	1429	CTATQSGWLC LHRPCPAWRCTWRRTWF CIRYKGEMVKVSRNYFSKLWLLYRYS DDSAFERFLPRVWCLLRRYQMMFGVGL LTRGTGLQGFAACMSLRPSTDSLAVS ECFASPLNCYFRQYCSAFPDTDGYFGSR GPCLDFAPLSGSFEANPPFCEELHGCHGL SL*ETA*ELTGAPVPSSVFIPEWAGNPQH QRSPA WKQ/MPLQTPPVDPA CL*A*VPQ WLPALHQEGGNALQGR PQHGCALPTE/P TLALPSGRRRLTGCRS*VLPTGSPGP/PAT ALVLP HRSYLGGPRTGIRGREQGP KPRA SPHLTYSCGEEGAPGVLSLDLLGLGPLGP QRDPGCH*HMKIMVLPGLPSLPVPKSSP QTPSKSHVYRS
145	8196	B	1130	1	3105	MGKKQNRKTGNSKEQSTSPPPKECSSP AREQSWTENDFDELREEGFRRSNYSELW EDIQTKGKEVENFEKNLEECITRITNTKK CLKELMELKTKARELREECNLR SRCDO LEERQINETESQQGYPGIELSSAPSGPNT HLQNSPPQINRIYIFSAPHHTYSKTDHILG SKALLSKCKRTEITNYLSDHSAIKLELRI KNLTQSRSTTWKLNLLNDYVWHNE MKA EIKMFFETNENKDTTYQNLWDAFK
146	8197	A	1131	1	2826	MEYYAAIKNDEFMSFAGTWKMLGTLIS KL PQGQKTKHHMFSLTAPHHTYSKIDHII GSKALLSKCKRTEITNYLSDHSAIKLELR IKKLTQNRSTTWKLTNLLNDYVWHNE MKA EIKMFFETYENKDTTYQNLWDAFK AVCRGKFIALNAHKRKQKRSKIDILTSQ KELEKQE QTHSKANRRQEITKIRAE LKEI ETQKTLQKINESRSWFFERINKIDRPLAR LIK KKREKNQIDA IKNDKGDIITDPTD
147	8198	A	1132	1709	2973	TEPKTKTT*LSQ*MQKRPLIKFSNASC*K LSIN/IVLDVLAIRAEKEIKGIELGKEE VKLSLFADDMIVYLENPIVSAQNLLKLIS NFNKVS GYKINVQKSQAFLHTNNRQTES QITSELPFTIASKRRKYLGIQLTRDMKDL FKDNYKPLLNEIKEDTNKWKNI PCSWVG RINIMKMAILPKATVTETA WYWYQNRDI DQWNRTEPSEIMPRIYHYLIFEKPDKNK QWGKDSL FNKWCWENWLAICRKLKLD PFLTPTKINSRWIKDLNVRPKTIK TLEE NLGNTIQDIGMGKDFMSKTPKAMATKA KIDKWDLIQLKSFCTAKETTIRVNRQPIE WEKIFANYSSDKGLISRIYNELKQVYKK KTNNPIKKWAKDMNRHFSKEDIYAVANR HMKKCSRSLAIREMQIQT TMRYHLTPV
148	8199	A	1133	1	2856	
149	8200	B	1134	1	3786	MVKGSIQQEELTILNIYAPNTGAPRFIKQ VLSDLQRDLDSHTLIMGDFNNPLSTLDR SMRQKVNKDTQELNSALHQVDLIDIYRT LHHKSTEYRFFSAPHHTYSKIDHILGSKA LLSKCKRTEITNYLSGHSAIKLELKIKNL TQNRSTTWKLNLLNDYWIHNEMKAE IKMFFETNENKDTTYQNLWDAFKAVCR GKFIALNAHKRKQERSKIDTLTSQLELE KQE QTHSKAGRKKEITKIRAQLKEIETO
150	8201	A	1135	1	3276	
151	8202	A	1136	1	3042	
152	8203	A	1137	1	3663	
153	8204	A	1138	1	3144	

154	8205	B	1139	1	3380	MVKGSIQQEELTILNIYAPNTGAPRFIKQ VLSDLQRDLDSHTLIMGDFNNPLSTLDR SMRQKVNKDTQELNSALHQVDLIDIYRT LHHKSTEYRFFSAPHHTYSKIDHILGSKA LLSKCKRTEIITNYLSGHSIAKLELKIKNL TQNRSTTWKLNLLNDYWIHNEMKAE IKMFFETNENKDTTYQNLWDAFKAVCR GKFIALNAHKRKQERSKIDTLTSQKLEKE KQEQTHSKASRRINKIDRPLARLIKKR
155	8206	A	114	161	218	
156	8207	A	1140	1	3345	
157	8208	A	1141	1	3429	
158	8209	A	1142	1	3030	
159	8210	A	1143	1	4170	MNSLEQNPRSKWELLHRGTMELWPTM WADEEQGLKAVLALS AKKFPVGARSK TGLTDCMGVGGGLLPAPFHIPGKRDSH NPLWNITPENQSPTPTVAMERSSSPATEQ SWMENDFDELREEGFRRSNYSELQEEIK TKGKEVKNFENLDECITRITNTEKCLKE VMQLKAKARELREECRLSRWRNQLEE RVSVMEDEMNMKREGKFREKRIKRNE QSLQEIWVYVVRPNLRLIGVPESDGENA TRLENT
160	8211	A	1144	1	3921	
161	8212	A	1145	1	2884	MVKGSIQQEELTILNIHAPNTGAPRFIKQ VLSDLQRDLDSHTLIMGDFNPLSTLDRS MRQKVNKDTQELNSALHQADLIDIYRTL HPKSTEYTFPSLPHHTYSKIDHIVGSKAL LSKCKRTQIITNYLSHSAIKLELRIKTLT QSRSTTWKLNLLNDYVWHNEMKAEI KMFFETNENKDTTYQNLWDAFKAVCRG KFIALNAHKRKQERSKIDTLTSQKLEKE QEQTHSKASRRQEITKIRAEKETETQ
162	8213	A	1146	1454	3917	
163	8214	A	1147	11537	15574	
164	8215	A	1148	115	450	
165	8216	A	1149	278	885	
166	8217	A	115	116	565	EPTGTASRAATMPNFSGNWKIIRSENQFE LLKVLGVNVMRLRKIAVAAASKPAVEIK QEGDTFYIKTSTTVRTTAEINFKVGEEFEE QTV DGRPCKSLVK WESENK MVCEQKLL KGEGPKTSWTREL TNDGELILMTADDV VCTRVYVRE
167	8218	A	1150	2	378	
168	8219	A	1151	172	464	ASHRVGLLQPFLNLWPSGCSTVLAKMK SVLVATEGAEVLFYWTDQEFESLRLKF GQSENEEEVGLLML*AR*PHPTPPVLS GLNEGKKKSNFIT
169	8220	A	1152	164	528	
170	8221	A	1153	1	1122	
171	8222	A	1154	1	558	
172	8223	A	1155	1	495	
173	8224	A	1156	51	579	LRSSSPATEQSWTENDFDKLREEGFR*SN YSELQEEIQTGKEVENFEKNLEECITRIT NTEKCLKDLMEKAKARELHEECRLRS RCDQLEERVSVMEDEMNMKREGKFRE KRIKRNEQSLQEIWVYVVRPNLHLIGVPE SDGENGTKLNTLQDHIQENFPNARQA NIQIQ
174	8225	A	1157	286	456	FCHLSSTSWGGADGTCREGGPLGGFMG PSHQ*ESSPVPEAASSFRTFKSSAVSQSPL

175	8226	A	1158	1	1758	MDDIPQEARQYRHNQAYAYSIOGDGAE DDDERIVRFHTRVTVSDTLASDAARLT CRHGLGNQDRSSSPAMEQSWTENDFDE LTEVGFRRSVITNFSELKEDVRTHRKE HSAIKLELRKLIQNLTWKLNNLLN DYRVNNEMKAEIKMFFETNENKDTTYQ NLCDTFKAVCRGKFIALNAHKRKQERSK IDTLTSQLKELEKQEQTHSKACRRQETK IQAELEKETQKTLQKINESRSWFEKINK IDRPLARLIKKKREKNQIDAINKDKGYIT TNPTEIQTIREYYKHL YANKLENLEEM DKFLDTYTLPRLNQEEVESLNRPTGFEIE AINSPLTEKRPVPDGFYHSSADCT RSMAPAPASGEALRLLPLMGEGEGELTC RDHIAREEAQECSSSPATEQSWMENDFE ELGEEGFRRSVITNFSELKEDVQTHFKEA KNLEKRLDEWLTRINSVEKTLNDLM*LK TVA*ELRDTYTSFNSRFDQVEERVSVIED QMNEMEREKFRKRV*RNEQS/LQEIW NYVKRPNLHLIGVSEIDRENGTKLENTL QDIFQENFTYLARQANIQQ
176	8227	A	1159	138	324	
177	8228	A	116	343	528	
178	8229	A	1160	1	525	
179	8230	A	1161	319	1035	EWSSVRRSLVEKRALRRHPQCCLCFRMK TILSNQTCRPFENVDITLKGRTVIVKGP /REGTLRRDFNHINVELSLLWKEKKRGF RVDK\WWGNRKELATGRD*FVSHVQN MIKGCTYGASGYKMKVLWYAHFPIQRL LFQGELGPSLLKSRNFLGGWKNTSRVS G*GPGCLLVSVSQGPRKDEINPLKGNDI ELVSKFQRALIQVATTVKNGVRKFFG WVSMSEKGTVPGLIE
180	8231	A	1162	232	338	
181	8232	A	1163	474	647	
182	8233	A	1164	1	413	
183	8234	A	1165	2	2545	
184	8235	A	1166	1364	1618	SQHSGRPRQADHLRSGVRDQPGQHGEIL SLLKIQKLAGRAGSRL*SQLLERLRYHR TPA*VTE*DMASKNKKKPHRIQARKYF
185	8236	A	1167	3	342	LTQELPGAEAHACNPSTLGGQGGQIMRS GARDQPGQHSCTPSLLKIQKLAGRGGT HL*SQLLRRLRQENRLNLGGGSELRL RHCTPAWVTDSVSKKNELEKESYLIFSSL T
186	8237	A	1168	2	232	WAGRGG SRL*SQHFGRRPRADHERWKN TWELRQLNLGQAPCSRNGMRRYGERRH HPDEPGQPSVEGFLRVLSMCIC
187	8238	A	1169	1294	1624	GQLYEKLGRRGPGAVAHACNPSTLGGR GGWITRSGDRDHPG*HGETPSLLKIQKK LAGRGGGHL*SQLLGRLRQENGVPNGA/ RGCELSRSCYCTPAWGTERDSVSKKKK K
188	8239	A	117	296	629	FKLTSSRNVPPTGP GAVAHACNPQHFR PRQVDHLRSGV*DQPGQHGETPSLLKVQ KLAGHGGVHL*S*LLRRLRQENRLNLGG GGCSEPRSHHCTPAWTTG*DSASKKKK
189	8240	A	1170	427	730	
190	8241	A	1171	6497	6788	SQRFGRPGQANCLSSGV*DQPGQYGETL SLLKIQKLGCGGTCL*S*LLGWLRQEN HLNLGDGGCSEPRMCHCTPPWTTEGGS A*KLKKKKKKRKYL
191	8242	A	1172	173	395	
192	8243	A	1173	239	404	

193	8244	A	1174	126	915	SACVSCNPAALLLALRSAGPPSFLPHPA RGSAGCVTLSHPTHQPAQHHGWTVKL EFPSPQCKVEDAEWYTPMRREMQUEI LPGFLGPGYSSAMKKQDPSLLAVSSHG QENEFLLTRVQSCHGGFYPHDLNLKLI IFQRLHHHILGLPVLQKHGITHICIRQNE ANFIKPNFQQLFSAFVIAIYIMETFGMKY RDAFAYVQERRFCINPNAGFVHQLQEYE AIYLAKLTIQMMSPL/RDRKVIICSFYWH RQFEENT
194	8245	A	1175	1	924	
195	8246	A	1176	441	707	
196	8247	A	1177	109	437	NQRRKWRRSRTQLQTLQEALKAIEIQGH QKLAAQMKQDPQADL*KQLYELQAKI TALSEKQKRVEQLRKNLIVKQEQPDKF QIQPLPQSDNKLRTAQQQPLQLQQQQ
197	8248	A	1178	343	670	
198	8249	C	1179	130	390	MAEQSLISGGPKPKSVNSLRWINLXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXX XXSWVDK*
199	8250	A	118	74	396	GQILALMPKGGGQGGILTYPNPPLPG*N NFPGLTPPRTGINGLGPPGRVNFQIFKKK GGFPPGARGV*NPGRGASSPGFPGRG *SPPP/QGPFKPLKRFDPDLPFPR
200	8251	A	1180	238	435	
201	8252	A	1181	615	945	
202	8253	A	1182	232	564	
203	8254	A	1183	3	487	LPNMAQSINITELNLPQLEMLKNQLDQE VEFLSTSIAQLKVQTKYVEAKDCLNVL NKSNEGKELLVPTDGVLCMSPGKLHDV EHVLIDVGTGYVVKTAEDAKDFFKR KIDFLTKQMEKIQPALQEKHAMKQAV MEMMSIQKIQLTALGEAQATAKA
204	8255	A	1184	187	423	
205	8256	A	1185	539	871	
206	8257	A	1186	158	1330	SVDLVIHPLWPPEVLGLQQOPTQFINPET PGYVGFANLPNQVHRKS VKKGFEFTLM VVGESGLGKS/TLS*NSLFLTDLYPERVIP GAAV*FFSRKN*KELVQIEASTVEILRAR GSSLRLASG*DTPGYG*PLFNCRDCF*G QFISYYLMRQF*GGYLAHDESGLNRRHI DNRVHCCFHFISPFHGLQPLDVAFMK AIHNKVNI PVIAKADTLTKERERLKKR ILDEIEHNIKIYHLPDAESDEDEDFKEQT RLKASIPFSVVGSNQIEAKGKKVRGRL YPWGVVEVENPEHNDFLKLRTMLITHM QDLQEVTDQLHYENFRSERLKRGRKV ENEDMNKDQILLEKEAELRRMQEMIAR MQAQMOMQMQGGDGDGGALGHHV
207	8258	A	1187	405	632	
208	8259	A	1188	111	375	
209	8260	A	1189	428	574	
210	8261	A	119	454	777	ADPMSPSSKSPNMEAVLWIPDTNIVL*SL KVYPSS*TIKSWLGT/CGSRL*CQHFRP RRVDHEVKRLRPS*PTWRTPSLL/RTTKIS RAWWHTSVVPATREAEAGESLE
211	8262	C	1190	216	458	MNRDRTSRNRCVCDVFRNAVKGQTVLG RQLFIGRVRVPVRPGEGLPWGFLPVSP WCPSWGLSTHALWWAEAVPGRALVH*

212	8263	A	1191	1	594	RTRGRTRGLLPSCAFEPAAAGSATAPRG CKNPGAKGGLLAAMAGRQDIFHAIVKA DERFHHGEGYREGYEKGSILGVKEGRQHG TLHGAKIGTEIGRYQRFPAWKCLLHIA PLRRTA*T*RS*HAWIGRIQIFPYDDPTYD KLHEDLDKIRGKFKQVRALCVSSC*EHLI APFPGGAAHSRGRGCGNGLGLRAPRNC
213	8264	A	1192	482	788	
214	8265	A	1193	572	676	
215	8266	A	1194	1	394	KGGSMHMYAKNFYGGNGIVGAOQOIFE AYNMAALWKLPCIFICENNRYGMGTSV ERAAPSTDYYKRGDFIPGLRVDGMDILC VREATRFAAAAYCRSGKGPILMELQTYR YHGHSMSDPGVSYRTREEIQE
216	8267	A	1195	641	722	
217	8268	A	1196	354	1145	KQISCINRKLFFVSVTCVMVRKLAVWA WRPASTPQTISSQPTGLTALLSPGAFPS KFSQSLQDEKEVVLKKGEDRCTCMPRTS TGAMASWERRCPWAAGIALACKYNGK DEVCLTLYGDGAANQQOIFEAYNMAAL WKLPCIFICENNRYGMGTSVERAAASTD YYKRGDFIPGLRVDGMDILCVREATYI GRAYCRSGKGPILMELQTYRYHGHSMS DPGVSYRTREEIQEVRSKSDPIMLLKDR MVNSNLASVEELKGI
218	8269	A	1197	2	506	
219	8270	A	1198	1	1455	
220	8271	A	1199	509	839	
221	8272	A	12	105	702	AGSSVSLGFCPAAAAHKPRGGALRLPVF RRRAQQGPDYALAGVARQPAGTCRRRC NRSHCRAEDPQWPTPAAAPAAHSPHMS LGESGLGKLILNSLFLTDLYSPEYPGPSQ RIKKPVQVYILVFLIDDKLE*Y*YTQSTC CNFHYASQSWQPAINYIDSKFEDYLNAE SRVNRCQMPGNRVQGCLYFIAPSGHGPHN
222	8273	A	120	133	359	RHCSSGMEIPTNYPASRADLVAQNYIN YQHGTPHRVFEVHNAYRVIMQDMSG* GHLVSPSSRFFLHSFATSLFE
223	8274	B	1200	109	267	MEETPCRELEEEEEWGSSEDASKKDGA VESISVPDMVDKNLTCPEEEDTVKV*
224	8275	A	1201	856	1030	VPNLQVGDEKQDSPNGEHWGQEDST AEPAEVKAMMSVAVV*KNLTPPPLLG RSSV
225	8276	A	1202	67	264	
226	8277	A	1203	3	1251	
227	8278	A	1204	1403	3362	
228	8279	A	1205	388	1711	ACALGMAPQRKRRKQLSMKTGSYSQRS SFQRRKRPOGQGRSRNSAPSGATLSLGA LAWHLEWLSVIQLWHYLFIGTLNSLLTN MAGGDMARVSTYTNAFAFTQFGVLSAP WNGLLMDRLKQKYQKEARKTGSFNIRG PHSLYFPNHHLPHATYRDKAKMKLPLLL ALLFGAVSALHLRSETSTFETPLGAKTL PEDEETPEQEMEETPCRELGGRGREW LWEVEDASQERWGLFESILQCPDMGGT KTFTCS*GKEGHQLKVGWGPGGCPRPA RYLPG*ESLSRRFSSKLWFYFARSCYRG QTWVFHSTTFQY*LSESKCSVLSALNQG QVWIGGRITGSGRICRRFQWVDGSRWA NFAIYWGIAHQPWSRGGHCVALCTRG GYWARAHCLQKNFPFICFPLWSQPAV QVVPSPGQLPPLLCLPSLPPPCNNNGFY
229	8280	A	1206	97	441	
230	8281	A	1207	19	432	
231	8282	A	1208	165	257	

232	8283	A	1209	80	1239	GAVVGGGRRRRRRITYKCLPKLDPKPK FOEGERVLCFHGPLYEAKCVKVAIKDK QVKYFIHYRGWNKNWDEWVPESRVLK YVDTNLQKQRELQKANQEQAEGKMR GAAPGKKTSGLQKQNEVKTKKNKQK TPAGNGDGGSTSETPQPPRKKRARVDP TVENEETFMNRVEVKVPIPEELKPWL DDWDLITRQKQLFYLPKKNVDSILED YANYKKS/RVGNTDNKEYA/VLNEVVAG D*KNTFNVMGLGTQLLYKFERPQYAEIL ADHPDAPMSPGVWSAQHLLLEIHWYRIGA MLAYTPLDEKSLALLNLYLHDFLKYLE KNSATLFSASDYEIVAPPEYHRKAVWKS TLTHLCLDLRKHIFVLSLSPWYKPMCFE DVS
233	8284	A	121	3	1671	SSGARWRFRAGSMGLFCQKQKHSS/SHPV LQKPSVFGNDSDDDDSVSESQREAA KKQAMKQTKLEIQKALAEDATVYEYDSI YDEMOKKKEENPKLLGKDRKPKYIH NLLKAVEIRKKEQEKMEKKIQREME KGEFDDKEAFVTSAYKKKLQERAEER EKRAAALEACLDVTKQKDLSGFYRHLL NQAVGEEVVKCSFREARSGIKEESRG FSNEVSSKKQNTTREMHSFKLM*K*REN PDADSYFDAKSSPDDK*KKLELTAEK RS*RPLRMTSSTTGVTTLGHLVKKEGT VPGTTRKDHERREDMRKGKISTSRNPE TKRTITLTVITGKKGILIGTERPVIEPIGR GMNRKINQGRGTKEKEVTEYKGRKIG RNIPKENKKEIDNKMIRTDVPRKERRR KAKQRKRAYESKGGKVLKLLINTEIEKN ER*VFS/ASERNQDQKQKQKQFQQRINF LTNLDIFIQNGETWQRTKERNQEKPSNSE SSLGAKHRLTEEGQEKGEQERPEAVS KFAKRNNETVMSARDRYLAROMASG
234	8285	A	1210	31	1029	WWNSEVPHGPFMRKAAVLT/APVLFSD G*ARRRHFWQGG*SPRAAWDRVKIDL ATRPWTVLKEQRTETYVSQFGLRLGE NS*TLKLLADNWDSDLPFSLREHSF GPC*PRDFLGINLGKRETRGALRQGR QRIFGRRLKGPRLQ*LGDDFPRKKLAR KEIGALTRQKGWSRLRARTSKKGARPE LHELARRSLSPLGEAVSRPRARPMWDAL RTHLAPYSDEMSQLGARLGALRENG GARMGQYHAQATEHLSTLSEKAKPAL EDLRQGLLPVLESFKVSFLSALEYTKK LNTQLRRPPPPYPVLRINVSQVGGKKK KK
235	8286	A	1211	3	450	QTQREPTMVLSPADKTNVKAAWGKVG AHAGEYGAEALERMFLSFPTTKTYFPHF DLSHGSAQVKGHGKKVADALTNVAH VDDMPNALSALSDLHAHKL RVDPVNFK LLSHCLLVTLAAHLPAEFTPAVHASLDK FLASVSTVLTSKYR
236	8287	A	1212	9	675	NSARATDSERTHHGARLLPDKTNVKA WGKVG AHAGEYGAEALERMFLSFPTTK TYFPHFDL SHGSAQG*RAHGKKVADA LTNAVAHVDDMPQTALSALSGPATAH KL RVDPVQLSSS*SHLPCWWTLGRPTSP SEFNPWRLHAFPGTKFPGLLVEAPLLEPS KLPLKLGSLRVGHAFAPLGLPPRALLPF PGTRNPVGLLNKILNWGGKKKKKKKIF
237	8288	A	1213	1	645	KIFLSDCLACDSCMTAEKGVQLSQQNAK DFFRVLN/LNKKCDTSKHKVLVVSVCQ SLPYFAAKFNLSVTDASRRLCGLKSLG VHYVFDTTIAADFS/H/RWRMLKWQRP PDSRRTCG*GPAAADGRHLR*HPCAASG VQCKRAGAVPGVAGGDQLPQGPRGAA YHVPEPGAWHTQPGHQVVKSGQLPAA LGAPAKSLVEGGAALSGVKTIKKT

						LGARAKSLSVEGGAALSGVLKTLKKT
238	8289	A	1214	193	564	
239	8290	A	1215	211	1795	TPLGRRRRRKTHDKRKPGQGPPGAEC SKKTKVADDQENVVSADAPSPAQENGEKG EFHKLADAKIFLSDCLACDSCMTAEEGV QLSQQNAKDFFRVLNLNKKCDTSKHKV LVVSVCPSLPYFCWLNFNLSVTDVASRR LCGFLKSLGVHYVFDTTIAADFSILAESQ KEFVRRYRQHSEGGNAPCPMLTSACPG L/WVRYAGAGCWGRPITG/HTFLAPPKSP QQVMGSLVKDYFARQQNLASPEKIFPRS LVAPICVDKKLAEALQGKPFPLALHGSR GRLTCVLTSGEICFKLMEQGDLSVRDA AVDTLFGDLKKDKVTRHDGASSNGHLA HIFRHAANKELFN/ERDVEEVYRTLRNQ RFPQKVTLLEEPKRWW*TFVLEPYAFRNI PET*SLKPLKKGKVPFFHFVEGSSPCAIG GCLNGKRPKPKIQDGHGDKAPAAGRM EGIY/SLDIPVRRPESAHVQELYQEWL EGINSPKARKVLAHTTYQSQVERGTHSLG HSSWLKFRPGPSSCSWGQSQEPLSRGRG LP
240	8291	A	122	170	339	IMKLITILFL*CRLLSLTQESQSAEIDLLD NDLFLAEEAIGLYRYIMQIQTNPRI
241	8292	A	1222	1	456	RPRRPQREPTMVLSPADKTNVKAAWGK VGAHAGEYGAEALERMFLSFPTTKTYF PHFDLSHGSSQVKGHGKKVADALTNV GHVDDMPNALSALSDLHAHKL RVDPVN FKLLSHCLLVTLAAHLPAEFTPAVHAFL DKFLASVSTVLTSKYR
242	8293	A	1223	2	435	QTQREPTMVLSPADKTNVKAAWGKVG AH/AGEYGAEALERMFLSFPTTKTYFPHF DLSHGSAQVKGHGKKVADALTNV/EH VDDMPNALSALSDLHAHKL RVDPVNFQ APKATGLLVDPGPAHFPGRVSPRLQGF LGTKFLGFC
243	8294	A	1224	9	390	NSARATDSERTHHGARLLPDKTNVKA WGKVGAGEYGAEALERMFLSFPTTK TYFPHFDLSHGSAQVKGPTAKKVAER ADQTPWRNVDDMPKRRCPP*SDLHAH KL RVDPVQLSSS*SHLPCW
244	8295	A	1225	3	452	
245	8296	A	1226	26	636	NSTDSETHHGARLLPDKTNVKA\AWG KVGAGEYGAEALERMFLSFPTTKTY FPHFDLSHGSAQVKGHGQKVADALT NAVAHVDDMPNALSALSDLHAHKL R VGPSTFKLLKPLALLG*TLGRPPSPA EFQPLGGCKASLGTKFLGFLVEAPLLEPSKL PLKLGSLRLAMLSLPLWAFPPAPPLSCT RTPVVFEIKS
246	8297	A	1227	17	233	AFGTRELQCCVFLASMLGVPIPTVQGF QWTLRGTDVETSPFGAPRATSHGVGM KSCQIPQLKJRMVKQNNIPGETQILLRF TGWESKVNAKKQPPVGKCEPMDQNE QTGGHETDGHRIGSVVSAATQECLI*N TTRNVWTQ*TKSNLTRCGPNEELPDPTA LEDKDGQTK
247	8298	A	1228	1	433	
248	8299	C	1229	312	443	MHKRNFRHAGRSQAVQDNWKELNNIYP VSPARLQALLPPAAPC*

249	8300	A	123	23	307	RQTRWCPVVRLSHYRTLGGCCHLRGR GVA*VRGPQSGTISSVENTPPWRRVSCFP APNITCKDSSGNETHFTGNEVGFFKPISC RNVNGYSYK
250	8301	A	1230	1	94	
251	8302	A	1231	2	122	DLLCPQMG*GWKLTALSLQCSLQDGIER SRAKASQCCLSI
252	8303	A	1232	3	53	
253	8304	A	1233	1	2679	SAVGSDHIFHNIPDSTSSATNVSMVVSAG PWSSEKAEMNILEINEKLRPQLAENKQQ FRNLKERCFLTQLAGFLANRQKKYKYE CKDLIKFMLRNERQFKEEKLAELKQAE ELRQYKVLVHSQERELTQLREKLREGD ASRSLNEHLQALLTPDEPDKSQGDQLQE QLAEGCRLAQQLVQKLSPENDEDEDED VQVEEDEKVLESSAPREVQKAESKVPE DSLEECAITCSNSHGPCDSNQPHKNITF EEDKVNSTVVVDRKSSHDECQDALNILP VPGPTSSATNVSMVVSAGPLSSEKAEMN ILEINEKLRPQLAEKKQQFRSLKEKCFVT QLAGFLAKQQNKYKYECKDLIKSMLR NELQFKEEKLAELKQAEELRQYKVLV HSQERELTQLREKLREGDASRSLNEHL QALLTPDEPDKSQGDQLQEQLAEGCRLA QHLVQKLSPENDEDEDEDVQVEEDEKV LESSSPREMOKAESKVPEDSLEECAITC SNSHGPCDSNQPHKNITFEEDKVNSSL VVDRESSHDECQDALNILPVPPTSSATN VSMVVSAGPLSSEKAEMNILEINEKLRP QLAEKKQQFRSLKEKCFVTQVACFLAK QQNKYKYECKDLIKSMLRNLQFKEEK LAELKQAEELRQYKVLVHSQERELTQL REKLREGDASRSLNEHLQALLTPDEPD KSQGDQLQEQLAEGCRLAQHLVQKLSP ENDNDDDEDVQVEVAEKVQKSSSPREM QKAEEKEVPEDSLEECAITCSNSHGPYDS NQPHRKTITFEEDKVDSTLIGSSSHVEW EDAVHIIPENESDDEEEKGPVSPRNLO ESEEEVPQESWDEGYSTLSIPPERHRW DQVKKEDQEATGPRLSRELLA
254	8305	B	1234	33	2996	MLRNERQFKEEKLAELKQAEELRQYK VLVHAQERELTQLREKLREGDASRSLN EHLQALLTPDEPDKSQGDQLQEQLAEGC RLAQHLVQKLSPENDNDDDEDVQVEVA EKVQKSSAPREMOKAEEKEVPEDSLEEC AITCSNSHGPYDSNQPHRKTITFEEDKV DSTLIGSSSHVEWEDAVHIIPENESDDEE EEEKGPVSPRNLOESEEEVPQESWDEG YSTLSIPPEMLASYKSYSSTFHSLEEQQV CM
255	8306	B	1235	16	1041	MVKQNNIIPGETQILVRFTGWESKVNK KPPVGIKCEPMDQYEECKDLIKSMLR NERQFKEEKLAELKQAEELSMVVSAGP WSSEKAEMNILEINEKLRPQLAENKQQF GNLKERCFVTQLAGFLANQQKKYNYEE CKDLIKFMLRNERQFKEEKLAELKQAE ELRQYKVLVHSQERELTQLREKLREGD ASRSLNEHLQALLTLDEPDKSQGDQLQE QLAEGCRLAQHLVQKLSPENDEDEDED VQVEEAELKQKSSAPREVQKTEESKVPE DSLEECAITCSNSHGPCDSNQPHKNITF EEDVNSTLVVDRESSHDECQDALNILP ACMTE*

256	8307	A	1236	1	2219	MSQSVQDNLKELNNIYPDHSSSPAMEQS RMENDFDELTEVGFRKLVITNFSELKED VRTHRKEAKNLEKRLDEWPTRMNSVEK TLNDLMELKTMARELRDACTSFSSQFDQ VQETPLKIRMVQKQNNIISAESQILVRFTS WESNVNAKKQLPVGIKCEPMDQECIPGS RACTLLVRFSNGGPPMDPGSERKDLLQL GGELARTSRVQEAGLGLSTGLWLAESR AKAALEKQALLQAQLEEQLRDKKDLAQ QQMQSDLDKADLSARVTELGLAVKRLQ KQNPEDQVNTDLTEKLEALVQMLPLES QLPIPTSGTLTPPGYSLVWSPLCVGPGLG SRSGSPPIDCVTWGKTDSTMQAHEDAQR EVQRLRSKELLRRLSGMLMEVEEPEVL QDSLDRCYSTPSMYFELPDSFQHYRSVF YSFEEQHISFALDVE/E*VSYFDGNKSPP GLPDGSHIPTPRTAGQARLLLHARRRIPQ ERTTTPKVSQLASWVSLG/RQYLHPAGS LRWL*TTLPPTSSSMFPLCPQ/YPSSEDSRE AGIKKDQEEEEEDQGPPCPRLSRELLEAVE PEVLQDSLDRCYSTPSSCLEQPDSCLPYG SSFYALEEKHVGFSLDVGGYLELTDSCQ PYRSAFYILEQQRVGWALDMDEIEKYQE VEEDQDPSCPRLSRELLDEKEPEVLQDSL DRCYSTPSGYLELPDLGQPYRSAVYSLE EQYLGALDVE/E*VPYYEDEETEQRSE DTGAGSHSW
257	8308	A	1237	3	1270	
258	8309	C	1238	160	267	MGPLTLSSSSLHTETFLCPILTQGHQSCQ CENRRL*
259	8310	A	1239	1	1233	
260	8311	C	124	35	91	MSPPQNKGPFPKSPGWFF**
261	8312	A	1240	401	2582	
262	8313	A	1241	946	2562	FPLAYSLLFPP/CSRLSRELLEVVEPEVLQ DSLDRCYSTPSSCLEQPDSCQPYGSSFYA LEEKHVGFSLDVGEIEKKGKGKRRGR STKRRRRGRKEGEEDQNPPCPRLSREL LDEKGPEVLQDSLDRCYSTPSGYLELTD SCQPYRSAFYILEQQRVGWALDMDEIEK YQEVEEDQDPSCPR*L*AITDA*FCVDTW RCQVQKQECVQFHFVNEG*ITPTDIAV GFHCSRCLGFHFPLPSFTHLL*VDHTSK AVWQLHGILSKFMENY*AHSFHDHCSLC VPRALTQSVL*PLHQCVTRPIR*AHFLS LSLPLPVFLFHSFLPGPLSQHKGNNSLP H*WICPFSF*TVPYVSHEI*LGLCGF*FPL AYSLLFPT/CSRLSRELLDEKEPEVLQDSL DRCYSTPSGYLELPDLGQPYSSAVYSLEE QYLGALDVEDRIKKDQEEEEEDQGPPCPR LSRELLEVVEPEVLQDSLDRCYSTPSSCL EQPDSCQPYGSSFYALEEKHVGFSLDVG EIEKKKGKGGKRRGRSCKKKKGRP
263	8314	A	1242	442	5178	HQELPDPTGPCGGRLLSLTIHGVTIYHA LLWARGPIMSKSQVLGEWEPVQGGKSS ENDKWTMSDPGAEAPTCRAASGVDKE QQGRWQGLWNSHIKPLKIRMVQKQNNIIP GETQILLRFTGWESKVNKKQLPVGIKC EPMQDQENEQTGGHETDGHRIVSVLHFP LISILSYATWGLSLECIPIGSPVCTLLVRF SNVGTRWSLEVRGSPCGFGSNKVCGVM TPEIKMVCVCEGKAGKAVGSGGVEGTK EVST

264	8315	A	1243	1	3242	MDKPRPGKTTFVIMVSPLPAPYTSPTFH MVTCPAHPRAFLALTHSWDPQVRPAVL NPLPRHGSSFVVKQPVAKQQPLRCLYIE VALSVMSPTAPSSSRSPWKRPLRPGFE QPGGSREAERLVGSRDSSRSLHSLHPV REPVPSLLSRIRGAAELPLSSDPAFGTG APPGQGSWQYKVLVHAQERELTQLREK LREGRDASRSLNEHLQALLTPDEPDKSQ GQDLQEQLAEGCRLAQHLVQKLSPEND NDDD
265	8316	A	1244	148	197	DPLGFL*QKRNNQEDD
266	8317	A	1245	1333	2383	RMKKEHVLHCQFSAWYPFRGVTIKSVI LPLPQNVKDYLLDDGTLVVSRRDDPPTH SQPDSDEAEIQQWSDDENTATLTAPEF P*SLPLKVQGSYQIPLGGQVSFPKV*FGS APRDVAYWIAMNSSLKCKTSLDIFLLFKS SDFITRDFTQPFHCTDDSPDPICIEYELVL EKWCEMIPGGAEFRFCVKENKLIGISQRD YTQYYDHISKQKEIRRCIQDFFKKHIP VQIL*MKDLVFDIYRDSRGKVWLIDFN PFGEVTDSSLFTWEELISENNFKRRFLV KVDAQEODSPSFSVAQTSEVTVPQPLIC SYRLPKDFVDLSITGEDAHKLIDFLKLLK RNQPEGR
267	8318	A	1248	66	703	RRRRLPSVAIMIILPGSSSHDEMFSDIY KURGDRGRGLCLEGGRGRWVSRTEGTI DDSLIGGNA\AESPRGAKGTERHK*ST GV\DIVMNHHLPGNKFSQKEASKKVHQR ITMKS\KGKP*KNRRPRKSKTFL*QGAA EQIKHILANFKKLQF/YFIGENMNPRWA WVLLLDY*RDGVPP\YMIFFK\DGLEME KMLTNVAIILDLSPOCH
268	8319	A	1249	1	521	MKNRSRNKGNVEWQAEGIRSKRSVGKQ RPSKAKIPSGDKNGVSLTHNEVINNDNP LESNDEKEGQEATCSRPIVP/EFQQ**LF RPE*WRRASGNLQIPKKRVS*GTRGSP SKKGERVRRDAQQTATW*TRSPASGCF QICEGNKQDEACDVRGLQHCHERHSLAG PREYMP
269	8320	A	125	50	230	NLKGPLRRPVSGIIHVISLPLYQKCSKNE KKIPWRQMEM/C*NVPSANNPPLGLLKN IVF
270	8321	A	1250	3	168	
271	8322	A	1251	3	249	
272	8323	A	1252	23	2669	
273	8324	A	1253	97	1609	GGKMAGGGGDLSTRRLNECISPVANEM NHLPAHSHDLQRMFTEDQGVDRLLYD IVFKHFQR\NKVEISNAIKKTFPFLEGLRD RDLITNKMFEDESQDSCRNLVPVQRVVY NVLSELEKTFNLPVLEALFSDVNMQEYP DFKFHIYKGFENV\HDKLPSPRKVEEEE KGRRLGLPTKSLNKGTEGNSFRKPDFG PPSGFPHPPCLGTTPE/NMGLSEHPCETE QINAKRKDTTSDKDDSLGSQQTNEQCAQ KAEPTECEQIAVQVNMGDAGREMPCP VPCDEVESPRGKSLHNHWNPKFNSLVLC ELVDIKKEKPFNSKVEICQAQARTHIN QASDIIVISSEDSEGSTDVDEPLEVFISAPR SEPVINNDNPLAESNDEKEG\QEATCSRPI IVPEPLIFRKLFT\FRESFRKRVIG/QKTHD FSESQ*GGGAPQEASSGGTEARHGEKA PIDF*EVHLTWEEYPSR\KETFPVSDFS PE*MGERAFQETC\SSSLRRGLG
274	8325	A	1254	3	274	FFASLLESPVSPRLAMPNCSCAAGVSC TCAGSCKCKECKCTSCCKSECEAISMVW GCG*GCCSCCP/AAASKCAQGCVCCKGAS EKCSCCD
275	8326	A	1255	788	1173	

276	8327	A	1256	80	231	IRPLPPRFKTESRSLPGPCLQPGTFLWSRN RRVLGFPSMNGEDMGLLFLCSEWERSSE GWLCTEKGEVDLTQLNPTAVPSCISLTAH CVFLFLVGGSTCAGSCKCKE/CKCTSC KKSECG/CH/PPGIWGC*GAWFSQHEW RGHGASPLL
277	8328	C	1257	81	476	
278	8329	A	1258	3	452	
279	8330	A	1259	9	486	NSARATDSERTHHGACLLPDKTNVKA WGKVGAGHAGEYGAEALERMFLSFPTTK TYFPHFDL\SHGSAQG*RAHGK\KVADA LTKRRGATWDDM/PQTALSALSDLHAH KLARVGPSTFKLL\SQLPCLGEPWAAHL PAEFQPLAVARLPWNKVSWGFC
280	8331	A	126	814	1292	GISPFYIFGQDMGLEKNPTSFPKMCFC PLESLPSYVGCWKTGNMSCVVCTVNW LRSVIYFWIFTNLSHFVLA LRLLAPG GGGNMPPRVL*CCRRTTGHQVWPSPR PEQTDQTARRPPSWRPTL/CSPLPLPPPR SGREKGNRARFLKGPRIG
281	8332	A	1260	3	497	PTLLVPTDSERTHPWLLSPADK\TNVKA AWGKVGAGHAGEYGAEALERMFLSFPTT KTYFPHFDL\SHGSAQV*GPRARKVADA LATNAVAQRGTIDIAQRACPLSDLHAHK LARVGPSTFKLLKATC/HCLGEPWAAHL PAEFQPLAVARLPWGQSFLGFLKQRC
282	8333	A	1261	1	1077	MLSGVGGFVLGLLFLGAGLFIYFRNQKA EESFVSALSIDLSGGGNMALLSMVCLKF PGGSCMAALTVTLMVLSSPLALAGDTR VPPVRLRKTEDEPLGCVLSGLRVGPDSVF PGRFCNRIVLVPPARFLEQVKHECHFF NGTERVRFLDRYFYHQEYVRFSDVG EYRAVTELGRPDAEYWNSQKDLLEQKR AAVDTYCRHNYGVGESFTVQRRVYPEV TVYPAKTQPLQHNNLLVCSVNGFYPGSI EVRWFRNGQEEKTGTVSTGLIQNGDWT FQTLVMLETVP RSSEVYTCQVEHPSLTS PLTVEWRARSESAQSKMLSGVGGFVLG LLFLGAGLFIYFRNQKGHSGLOPTGFLS
283	8334	A	1262	3	825	LFSSMVCLKLPGGSSLAALTVTLMVLSS RLAFAGDTRPRFLELRKSECHFFNGTER VRYLDRYFHNQEEFLRFDSDVGEYRAV TELGRPVAESWNSQKDLLEQKRAAVDN YCRHNYGVGESFTVQRRVHPQVTVPYPA KTQPLQHNNLLVCSVSGFYPGSIEVRWF RNGQEEKAGVVS\GLIHNGDWT\HTL VMLETVPRISEEVYTCQVEAPRA*QAPL TVEWRARSESAQSKMLSGVGGFVLGLL FLGAGLFIYFRNQKGHSGLOPTGFLS
284	8335	A	1263	11	885	DLPASLAPGPVLFSSMVCLKLPGGSCMT ALTVTLMVLSSPLALAGDTRPRFLWQP KRECHFFNGTERVRFLDRYFYNQESVR FDSVGEYRAVTELGRPDAEYWNSQKD FLEDRRAAVD TYCRHNYGVGESFTVQR RVQPKVTVP SKTQPLQHNNLL/VFCSV SGFYPGSIEVRWFLNGQEEKAGMVSTG\ L\QNEGDPFQTLVMLET SFGVERVNT\ SQVEHPKCARPLTVE*RARSESAQSKML SEVGGFVLG\LLPLGPGLFIYFRNQKG HSGLOPTGFPELKCR
285	8336	A	1264	25	628	EFHRLRENPPWCLSPADKTNVK/APAWG KVGAGHAGEYGSEALER\MVLPFPPTPKP YFPHFDL\SHGSAQV*GPRARKVADALA TNAVAQRGTIDIAQRAVPPLSDLHAHKLA RVGPSTFKLLKATC/HCLGEPWAAHLPA AEFQPLAVATSSLGTFKPGFLVEAPLLTF QITFKGWKLWLAIVFLPFGLPSPSSPFL HPYPRGL

286	8337	A	1265	1	625	CKFIRVMAHTRLRLPLRRKKAHLMEIQ VNEGTVAEKLDWARERLEQQVPVNVQVF GQDEMIDVIGVTKGKGKGVTSRWHTK KLPRKTHRGLRKVACKDGKLIKNNAST DYDLSDKSINPLGGFVHYGEVTNDFVML KGCVVGTKKRVLTLRKSLLVQTKRRAL EKIDLKFDITTSKFGHGRFQTMEEKKAF MGPLKKDRIAKEEGA
287	8338	A	1266	1	1251	
288	8339	A	1267	1	903	
289	8340	A	1268	1	1131	
290	8341	A	1269	1	1345	WALPAGFDGVMShRKFSAPRHGSLGFL PRKRSSRHGKVKSFPKDDPSKPVHLTA FLGYKAGMTHIVREVDRPGSKVNKKEV VEAVTIVETPPMVVFGVIGYVETPRGLRT FKTVFAEHMSDECKRRFYKNWHKSKKK AFTKYCKKWQEDDGKKQLEKDFSSMK KYCQVIRVIAHTQMRLPLRQKKAHLM EIQVMNGGTCARESWDWGPREGKQQV PVKPSVLGRDEMIELHRG*PKGQKAYK GGHPVVWHTQESCPRKD/HHPRACAKV ACIGAFHPARVAFSVARAGQKGYHPR TEINKKIYKIGQG\YLIKGGKLIKNNAST DYDLSDKSINPLGGFVHYGEVTNDFVML LKGCVVGTKKRVLTLRKSLLVQTKAA GLWRRITLKFIDITTSKFGHGRFQTMEEK KAFMGPLKKDRIAKEERSLMPGTDFAV GGVSIKVIH
291	8342	A	127	191	482	DSSGQVQWLKPIIPVLGNLRQADHLRSG VQDQHVQHGETPSLLKIQKKLARHGGA CL*SQLLGRLR/QETH*NSGSRGCSEPR RHCTLA*ATEGDSI
292	8343	A	1270	3	451	
293	8344	A	1271	9	487	NSARATDSERTHHGARLLPDKTNVKAIA WGKVGAHAGEYGAEALERMFLSFPTTK TYFPHFDLASHGFCPRLKGPRQRRWPDA LTKAVAHVDGHAQTALSGPEATLHGA QSFGVDPVQLSSSLSHCLLG*PWAHL RPSSTPGGWNAPGTFKFPWVSC
294	8345	A	1272	197	821	RLFHSNQTVDSHQKNVDITLKG\RPNSR VRAPKGTLR\RD\NPHQM*NSALLGKEQ QRGFRVD\KWWGYQKGNWPTRSGLFGS HVQDWMIKGWLPLGLPVT\KMRISVYAHF PHPTLLSRENGVSLKSRNFLG\EKYIPQ GFRMKTRVLLCQYLKAQKR*N*SLEGN D\GLVSNFSRLIPASPTRLKTKGIRKVL DGIFCLLEKGLFRQA
295	8346	C	1273	22	282	MSEGPSVRSEEAICLYYEELGGGARQTH VRRPLSECPGDWSHSGVAEGPXCIQFL HITSHGAKEALSTWLGLLTSGPATTA AVLP*
296	8347	A	1274	60	1576	GYLGAPVALGLWALCWSLAIAITPLPPT SAHGNVAEGETKPD\PDVTERCSDGWSF DATT\DDNGTMLFFKGEFVW\KSHKWG PGV*SSERWEGFSPSPCGMLAFFKVN SVLS*SKGGDKVLGY*PSLKKKGRKGLP KVC\SKIDFP\GIPHSP\LD\AAVECHRGEC QAE\GV\FFQGDRE\WFWDF\TGNHGR ERSWPAVWGTCS\ALRWAGPLTYWLS RGNQFLRFRPCQGEVPPR\YPRDVREY FMPCPGKGHGTQEWGLGHGNSNHGHP *IYAACSPHLSLCLALTS\DNHGANFCLS VGTHYWR\LDTS\RDGWHSLAPLLIKWP QG\PSAVDAAFSWEEKLYLVQGHPGYY VFLT\KG\GY\T\LS*GGYPKRLGEREVGDP SWGFI\DSVDAAFICPGVFLRLHYSWA GRRLWVGW\VP*KSGSPKPTWTELSFGP HEKVDGALCMEKSPFGPKFMFPNGPG L\YLIHGPNFTL\YSVVEKLN\AAKALPQ

						PQNVTSQSPGACTH
297	8348	A	1275	1	3431	MLPHERGLETTTPRGECIPVRIDTKLFEML VPQCHKEIALEHKFIYSFLVTLNTKPPGY SHSHPEALLDPEVGD PNGTNAQLIKCFL PLCPSFPLCPEECMHCSGENYDGKISK MSGLECQAWDSQSPHAHGYIPSKFPNKN LKKNYCRNPDRELRPWCFTTDPNKRWE LCDIPRCTTPPPSSGPTYQCLKGTGENYR GNVAVTVSGHTCOHWSAQTPHNRTP ENFPCKNLDENYCRNPDGKRAPWCHTT NS
298	8349	A	1276	111	2785	VNNVLGLGHTFWALLASPKMEHKEVVL LLLLFLKSGQGEPLDDYVNTQGASLFSV TKKQLGAGSIEECAAKCEEGEFTCRA QYHSKEQQCVIMAENRKSSUIRMRDVV LFLKKKVYSLQSAKTGNGKNYRGIMS KTKNGITCQKWSSTSPRRPRFSPATHPS EGLAENYCRNPDNDPQGPWCYTDDPE KRYDYCDILECEEECMHCSGENYDGKI SKVTMSWDWECQGLGTFQEPHTVHG
299	8350	A	1277	29	454	
300	8351	A	1278	1	1368	
301	8352	A	1279	1	1269	PPTRPPTRPAPGLVPKPSTICTPACQGLS GAAMKSLVLLLCLAQLWGCHSAPHGPG LIYRQPNCDDEPETEEAALVAIDYNQNL WGYKHTLNQIDAEVKVWPQQPSGRAVL RFEIRTPWGTTLPCCWDPTLVGQDASLE GSLKEHAVEGDCDFQLLKLDGKFSVVY AKCDSSQDSAEDVRKVCQHCPLLAPL NDTRVVHAAKSCPGPPFNAQNGFQFFS LEEISRAQLVPLPPSTYVVEFTVSGTDL FA*KKATEAAKCNLSGQKSNMGFKIAT LSEKLGSGQRLQLTCTVFQTPVTSQP NPEGANEAVPTPVVDPDAPPSPPLGAP GLLP SWLTPKTTMVLLAAPPQHQLHRIA HYDLCHTFMGVVSLSGPFRRKCSHPRK NT/RTVVEA*WLGAAAGATGFLPLFRGG IRHFKV
302	8353	A	128	1445	1778	NLSRNKEVLLFGKNIPWVGWARWLVPG NPNTLGGQGRADHLKLGVDQPGQHGE IPSLKIQKLTRHGGVCL*SQNHLNPGG GGCSELRSHHCTCTPAWAME*DSIPKN K
303	8354	A	1280	1	1254	
304	8355	A	1281	1	921	
305	8356	B	1282	70	572	MGKEKTHINIVVIGHVDSGKSTTTGHLY KCGGIDKRTIEKFEKEAAEMGKGSFYA WVLDKLKAERERGITIDISLWKFETSKY YVTIIDAPGHRDFIKNMILNHPGQISAGY APVLDCHTAHIACKFAELKEKIDRRSGK KLEDGPKFLKSGDAAIVDMVPGKPI*
306	8357	A	1283	1	1410	
307	8358	A	1284	1	1386	

308	8359	A	1285	70	1538	KPKWERKRLIFNIVVIGHVDSGKSTTTG HLIYKCGGIDKRTIEKFEKEAAEMGKDSF KFAWVLDKLLKAERERGITIDISLWKFET SKYYVTIIDAPGHRDFVKNMITGDISRL DCAVLDLFAISGVGEF*SLVSPKNGQVTR EHALLAYTLGVEQLIVGVNKMMDSTEPP YSQKRYEEMWLREVSTFAIKKIWLQPPTQ *HFVPISWFGIGDNMLEPSANMPWFKG WKVTRKDGNASGTTLEALDCILPPTRP TDKPLRLPLQGVHKLGGIGTVSSAPME TIGFSNPGMVVTFAPSPR*QRKVKSCRKC THEALK*SSFLGTNVGLQLSGIVSCQGM FRPWQTVAG*PAKNDPTQWESSWASLV RGDYP*PIPGQNKAPGYAPCIGIGAHGLT FACKFAELKEKIDRRISGKKLEDGPKFL KSIGDAAIVDIVPGRPMCYESFSDYPPL GRFAVRDMRQTVAVGVKAVDKKVCW SWARSPKFAQKG
309	8360	A	1286	41	601	APSPRRPWGHFTEEDQGLLSTSLWGKIV KCGKNAGRKKPLGKAPLVVL/HPWDPK RSFEQALGNPVPLPSAUMGNPPKSAHAG KKVLT/SLGEMPIKHPG*SSKGTFAQA*S ELHCDK/LHVDPENFKLLGNVLVT/VL AIPFSAKEFTPGGCRASWAERWVTWSW PVPCSSRIPLSSLAHDCRAFQG
310	8361	A	129	3	369	PGFPLFSFPEGNGPSKRQTGD*IRCLF*DG KVWECSPSSSSSPKKRKKAVIF/CVPVQ TKCIVVEGGEETLVGDV*V*P*GSFKHV VAMFPEK/DCLCTLYEASFKTESRRVD GFVCVRVGT
311	8362	A	1290	2	217	
312	8363	A	1291	1	2283	
313	8364	A	1292	249	433	KWRCGNWPRRTLMPWLH*NFVPTLGQT ELQLKEFLSICKEENMKFCWQKQHFEEN KKVPAS
314	8365	A	1293	778	1578	PRQVDPSWGFHSRLSGPW/H/WTERDAT SLSKKGKVPAGPGGHLWKNDAGRGEIN ELKQVEGEASCSSRKGLIFFYEWNIKL GWKGIVKESGVKHKGLIEIPNLSENEV DDT/EEFTTGMLPTKAMATQELTVKRK LSGNTLQVQASSPVALGVRIPTVALHMM ELFDPT/S*SSLYSIFTVKEEERVCVLFSLT NKKIIMKWR\WGTWPEEHYAMVALNFV PTLGQTELQLKEFLSIYL*RKVP*NFCWQ KQHFEEIKGSLQLTPLNG
315	8366	B	1294	46	386	XIRHESGSRSHSHCSTLSSIGDVAKKLG MWNNTAADDKQPYEKKAALKKEYEK DIAAYRAKGKPDAAKKGVVKAESKKK KEEEDEEDEDEDEDEDEDEDEDEDEDE DDE*
316	8367	A	1295	263	484	
317	8368	A	1296	157	886	TWKGKDLKPRANMSSYAFFVQTCRGG \HKKKHPDASVNFS/ESFSKKCSERWKT MSA*R/EKGKFEDMAKADKARYER\EM KTYIPPQRGRQKRKFDSQLHPRGPPSG LLSSSCSEYRPKIK\GEHPGLSIGDVAKK LGRDVGINTAAD\DKQPY\ERRAAKLKE KEYKDIAAYRAKGKPDAAKKGVVKA KSKKKKEEEEGEEDEDEDEDEDEDE DEEDEEDDGLMKNLGS GAVFFFSCL
318	8369	A	1297	1	450	CKSRGSNLRVHFKNTRETAQAIGMHIR TATKYLKDVTLQKQCVFRRYNGGVGR CAQAKQWGTQGRWPKSAEFLVIEHI QVNKAPKMRRRTYRAHGRINPYMSSPC HIEMILTEKEQIVPKPEEEVAQKKKISQK KLKKQKLMARE
319	8370	A	1298	1	1725	

320	8371	A	1299	278	879	SVKMYRYSLDPGGTPRKSC/SQRGSNL RVPFKDHS*KLPQAHQGVCHIRKSPTKY LKDVHLTRNQCVPIPDYNGGICKVCR RPKQWGWWTQGRWPQKGVNLFLHML KNAE/SNAELKGLDVLVIEHIQVNKA PKMRRRTYRAHGRINPYMSSPCHUEMI LTEKEQIVPKPEEEVAQKKKISQKKLKE TPTLWHGE
321	8372	B	13	7	177	MSVSARSAAAEERSVNSSTMVAQQKNL EGYVGFANLPNQVYRKSVKRGFEFTLM VVE*
322	8373	A	130	412	616	VFVCLFVCFETGSCSVTQAGGQWCNHG SLQPQATSAS*IVGAGVAGVYHHFQVFL LLFNREDEVLLY
323	8374	A	1300	85	266	
324	8375	A	1301	1	1776	
325	8376	A	1302	207	1645	LSQRALRLSPRARSFSLSPACPLPCLLALS LALSSRIEGLTTACGWGRETEAAAAAQG KRGCSGGRKMSGEDQQEQTIVD/DSL VVTKYKMGGDIANRVLRLVEASSSGVS VLSLCEKGDAMIMEETGKIFKEKEMK KGIAFPTSISVNNWCM/CHFSPFERSDPG LYSSKEGDLVKIDLGVPWGMFIANVA SH/SFVVDVAQGTQVTGRKADVIKAAH LCAEAAALRLVKPGNQNTQVTEAWNKV AHSFNCTPIEGMLSHSLKQHVIDGEKP*F QNPTDKQK\RAHEKADFEVHEVYAVDV LVKPQERARPKDAGORTTIYKRDPSKQY GLKMKTSRAFFSEVERRFDAMPFTLRAF EDEKKARMGVVECAQT*TCWQPFNVL Y*EGRVILFAQFKFTVLAHGPNGPMRNT S\GPFE\DFYK\SEMEV\QDAELKALLQS SAKSEKPQKKKKK\KASKTAENATGGIL CSLGNIRRK
326	8377	B	1303	29	200	MSRTRLVCPSLIPFCIYVVDVGFSPGPQS CTSHEPKDIHAKCELAFLHHQRFYKNEG X*
327	8378	A	1304	138	1908	ASRTAVARWECVLQNVRRSPSPRAWP SQLRPIASTATKCRECGPGYSTPLEAMK GPREEVYLPCILPETQGTEGPRLSWAT VDVDPKSPQYCQVIHRLPMPNLKDELH HSGWNTC\GSCFG*LAPSRGTKLVLPSPF HLLFGIYVGGTWGSEPRAPKLAQGSLS RDIHAKCNWAF\HTSHCLASGEVMISSL GDVKGNKGKGGFVLLDGETFEVKG TWER PGGAAPLG\DFWYQPRHNV\MI STEWAA PNVLRDGFNPADVEAGLYGSHLYVWD WQRIEIVQTL\SLKDGLIPLEIRFLHNPDR CPKAFV\G\ALQAPNIQRFLQRTRG\TLF SGRR*FQV\PPRKLKGWLLPKMPGL\ITTI LASPWNDGFLYFSNWLAWGP*GKYDIS DPQRPALTGQLFLGGSIVKEGPVQVLED EEL/TSPSPEPLVVKGKRVGEGPQMIQL SLDGKRLNNHHGRCT\SALGQSSFYP*SQ SGERLLVNAGRVEW*DNSKKGGA*KLN PQLSWVDFGEGAPLPKPLPH*ARYPGGA DCSS\DIWILNSPPSHPSLFWALHFPGGP GLSFCISLGTRTLKGHVPTTAKLRLWQC VES

328	8379	A	1305	1	1000	STRAPSPGPFSSKLAGAYKSWCRRDPR THSAGAQAAAAARVPIRCAPTASATMS HHWGYGKHNGPEHWHKDFPIAKGERQS PVDIDHTAKYDPSLKPLSVSYDQATSL RILNNIGHAFNVFDDSDQKAVLKGGP LDGTYRLISVFTFWGGSF*WDKVSEAY CGIKKKYAAE\TLGHWNTKYGDFGKA VQEPDGLAVLGIFLKVGSAPGLQKVVD VLDSIKTKGKSADFTNFDPRGLLPESLD YWTYPGSLTTPPLECVTWIVLNFPSV SSEQVFEIP*TLTFNGGGVNPEELMVDN WRPA\QPLKNRIQIKASFQIRWSHSLYSK
329	8380	C	1306	127	435	MAASXNPEVLDITEETLHRSFLEGVRNV ASVCLQIGYPTXASVPHSIINGYKRVLAL SVETDYTFPLAEKVKAFLADPSAFVAAA XLGCCHHSCSXCCSPS*
330	8381	A	1307	1	689	KCFI/VGADNVASKQMQRMSFRGKAV C*WGKNTMMRKPIRGHLENNPALEKLL PHIRGNVGFVFTKEDLTEIRDMLLANKV PAAARAGAIAPCEVTVPAQNTGLGPEKT SFFQALGITTISRGTIELGVRNVASVCL QIGYPTVASVPHSIINGYKRVLALSVD YTFPLAEKVKAFLADPSAF/VAAAP/VAA ATTAAPRAAAAPAKVEAKEESESEDED MGFGLFD
331	8382	A	1308	68	1111	RTAVMPREDRATWKSNYFLKIIQLDDY PKCFIVGADNVGSKQMQRIVPWGEA CVLMGQKTMMGQAHPKGT*NNPSLW RKLLPHIRGNLGFCTQGGPSLEIKGHV CLANKGLPSWLPVVGANCPHGESHWWP APEHWSSGPEKTSFFPGL*AITTKISQGA PIENPEVNVPAESRTGDQSGEPSEANAA* TCSNISPF\SGAGSSQPGVSTNGSHLPPL KGLDIHRRNLCIFWLSWEGVRKCCPVSV CQIGYPTVASVPHSIINGYKRVLALSVA EPDYTFPLAEKVKAFLADPSAFVVAATC GLLPQQLLVVVAAPAKVEAKEESESESD EDMGFGLFD
332	8383	A	1309	60	569	STDLEELPTLGWF*KQELIILSCPFVSLTY RERLPANFFKFQFRNVEYSSGRNKTFLC YVVEAQGGQVQASRGYLEDEHAAA HAEEAFFNTILPAFDPALRYNVTWYVSS SPCAACADRIIKTLSKTKNLRLLILVGR/L FMWEEPEIQAALKKLKEAGCKLRIMNLV
333	8384	A	131	278	464	YTHILRQLPTLRHEQKSRENCLEEMSLD RFQAAKP\SPPTHTHTYKPTLAGH*KIHA MGLTRA
334	8385	A	1310	62	858	QLRWDSGARAWPRPACLSPLPQRLLSHS PSMAQKEEAAVATEAASQNGEDLENLD DPQKLKELIELPPFEIVTGERLPANFFKFQ FRNVEYSS\GRTKTLALCYVV*STGARGG KVQASWGYLEDEHAACPLQKESFSFNT ILPAFRPKPLAVTNVT/WGYVSSSPCAA CADRVVKTLSTKNLRLLILVGR/LFMWE EPEIQAALKKLKEA\GCKLARIMKPDQFRI LSWENFVEQEEGESKAFQPWEDIQENF LYYEKLDILK
335	8386	A	1311	1	727	NTEDORNEEKAQREANKKIEKQLQKDK QVYRATHRLLLLGAGESGKSTTVKQMRI LHVNGFNGDEKATKVQDIKNNLKEAIET IVAAMSNLVPVELANPENQFRVDHILS VMNVPDFDFPPEFYEHAKALWEDEGVR ACYERSNEYQLIDCAQYFLDKIDVIKQA DYVPSDQDLLR\CRVLTSGIFETKFQVD K\NVFHIV*RGVGQRDERRKWIQCFNDV TAIFVVAASSYNMVIREDN

336	8387	A	1312	2	1271	PVRSSAPRRGHSVASAPRSGLRQVAGR GAALPCSLAPGCGAAAGASPCPGAGRR RAAGGRCLACECTSLTCAGESGKSTIVK QMRILHVNGFNNEGGEEDPQAARSNSD GEKATKVQDIKNNLKEAIETIVAAMSNL VPPVELANPENQFRVDYILSVMNVPDFD FPPEFYEHAKALWEDEGVRACYERSNE YQLIDCAQYFLDKIDVIKQADYVPSDQD LLRCRVLTSGIFETKFQVDKVNFMFDV GGQRDERRKWIQCFNDVTAIIFVASSS YNMVIREDNQTNRQLQEALNLFKSIWNNR WLRITISVILFLNKQDLLAEKVLGKSKI EDYFPEFAR\YTTPEIDATPEPAGEDPR* TRAK\YFIR\DEFLRISTASGDGHCYCYPH FTCAVDTENIRRVFNDCRDIIQRMHLRQ YELL
337	8388	A	1313	235	1571	GRPRPPPPQGRAPPPPPRMGCLGNSKT EDQRNEEKAQREANKKIEKQLQKDKQV YRATHRLLLLGAGESGKSTIVKQMRILH VNGFNNEGGEEDPQAARSNSDGSEKAT KVQDIKNNLKEAIETIVAAMSNLVPPVEL ANPENQFRVDYILSVMNVPDFDFPPEFY EHAKVLWEDEGVRACYERSNEYQLID CAQYFLADKIDVIKQAD\YVPSDQDLLR/ CARVLTSGIFETKFQVDKVNFMFDV GGQRDERRKWIQCFNDVTAIIFVVGSS SYNMVIREDTGHNGLAGRL*TSKGIW DNRWAAAPSLVILFLTKQ/EILLA*ESPLA GNSKNKDYFPEFAR\YTTPEGCYSRRPG EGPHGVYRGQVTPFEDEFRLSSNCPVED GRHYCYPHFTCAVDTENIRRVFNGLAV DIHFSGMHLSFSYGAGFKEGEPKFNLK A
338	8389	A	1314	3	784	
339	8390	A	1315	3	2231	PAMNGLSLSELCLFCCPPCPGRIAAKLA FLPPEATYSLVPEPEPGPGGAGAAPLGT RASSGAPGRWKLHLTERADFQYSQRE STIEVFPTKSARGNRVSCMYVRCVPGAR YTVLFSGHNAVDLGQMSSFYIGLSRL HCNIFTYDSSGYGASSGRPSERNLYADID ATWQALRTR*GRPLVGRVRARWRPRLT LLRRRQVRHQPGQHPSCTRSGHIGAPP WDWASRYECAAHILHSPNLGHARRIPR HPRKTYCFDAFPLHSRKVSKINVSPPSS HGHEGRGDRLSRTGWALYEALPPRRVE PLWVEGAPGTTDIEPLQPVGAAGVAFIL PGAAQPARLAAAPNRPDLNKAAPGLHP APAPTQGLACGPPGRPRWRPGLGGARH EWA VDDVQATRTHSFPGSKKKIRENG QLKI
340	8391	A	1316	1	1347	
341	8392	A	1317	53	1027	NFRVEAGVRGVQKQKTCFAKVLKESIGKL GLALSVAGGAENSALYNVDAGHRAVIF DPIPGQK*QDIVVGEETHFLIPWVQKPK LSNDCRSRPRNCCQSITGSK\DLQNVNIT LRHPSSGPVRQPSFPRIFTSIGEDYDERV LAVPSQLENLKS\VARFDAGELITQRE LVSRQV\SDDLITERAATFGLLDDVSLT HLTFGK\DFT*AVEAKQVAQGGKQRRR RFV/VLEKAEQKKVA\IISAEGDSKAAE LIANSLATAGDGLIELRKLGLQRTFAY QLSTLSGTSPYLPAGQS\VLQ\LPQLRAH PCLAPPAGLTWGHSPD
342	8393	A	1318	424	598	
343	8394	A	1319	3	371	

344	8395	B	132	639	1718	MDPLGPAKPQWSWRCCLTTLFQLLMA VCFFSYLRVSQDDPTVYPNGSRFPDSTG TPAHSIPLILLWTWPFNKPIALPRCSEMV PGTADCNITADRKVYPQADAVIVHHREV MYNPSAQLPRSPRRQQRWIWFSMESPS HCWQLKAMDGYFNLTMSYRSDSDIFTP YGWLEPWSGQPAHPPLNLSAKTELVAW AVSNWGPNSARVRYQSLQAHKVDV YGRSHKPLPQGTMMETLSRYKFYLAFE NSLHPDYITEKLWRNALEAWAVPVVLG PSRSNYERFLPPDAFIHVDDFQSPKDLAR YLQELDKDHARYLSYFRWRETLRPRSFS WALAFCKACWKLQESRYQTRGIAAWF T*
345	8396	A	1320	1	1596	
346	8397	A	1321	2	556	WDMMYVTRFASFLRNVLPFSFISDWLYV QKMNTWFKHENYGLMPLNGYKMEIFF IQKRGALI**IYLSIKPSVKEFTTSAVFED GTMFEAIDSVIFATGYDYSYFLDETIMK SRNNEVTLFKGIFPLMEKPTLAVIGLVQ SLGAAIPTADLQAWWAQVFAWRWAIL SFIHFINEHLLNTCY
347	8398	A	1322	955	1187	IFFFFFFKMESCPFAQAGVQWCDLGLSQ ALPPGFTPFSCLLSSWDYRRPPHLAN FLYF**TWVFTVLARMVSIS
348	8399	A	1323	6345	9041	
349	8400	C	1324	182	433	
350	8401	C	1325	72	254	MVSTQLRQASDPRRTTIGRERFELLRRV DKLMSPLPTGTNLPHHFWTSLIPQVGR CNAP*
351	8402	A	1326	225	735	GELRVNSLHVSTHFQIPEETDIGWLVSFG QGPAPFEDIQLWPPGSLMAAEPDQSL EESH*DRWITTFFTFARQEGRKD*PQRS NEFKELVTTQQLPHLKDVGSLDRKN*G AWDVNQDFGGSRFNEYWRLIGGAWPK EIRKEEKTLEIERSKAAWLEDGVQGR T
352	8403	A	1327	55	391	
353	8404	A	1328	996	1334	WASVGLSGPRSPSSRPQ*ARPRGAPAS LRQADLGRGWRDRLGAPRPRPTGGW RSCCRGRGPGSRPRGARAGLPGAPGG WRRSRRSWTRARAATRPAAARGSRTP RG
354	8405	A	1329	1	993	
355	8406	B	133	1154	2233	MDPLGPAKPQWSWRCCLTTLFQLLMA VCFFSYLRVSQDDPTVYPNGSRFPDSTG TPAHSIPLILLWTWPFNKPIALPRCSEMV PGTADCNITADRKVYPQADAVIVHHREV MYNPSAQLPRSPRRQQRWIWFSMESPS HCWQLKAMDGYFNLTMSYRSDSDIFTP YGWLEPWSGQPAHPPLNLSAKTELVAW AVSNWGPNSARVRYQSLQAHKVDV YGRSHKPLPQGTMMETLSRYKFYLAFE NSLHPDYITEKLWRNALEAWAVPVVLG PSRSNYERFLPPDAFIHVDDFQSPKDLAR YLQELDKDHARYLSYFRWRETLRPRSFS WALAFCKACWKLQESRYQTRGIAAWF T*
356	8407	A	1330	72	496	PPWARGSARRPPAWRTVRMPSPCHPRMF GAQKTFLRVSVWSRCRPWGIVMRMM* PMRGQVRRHNSCMAPKTEE*NPTVSATF CCCSFVSCSWPPVTRYSSILFTAAM
357	8408	C	1331	202	378	MTPYLTLFLSPLPPKGEIWGLLLFLTPLG FLLPSLPLLLPCPAPAGVRRQWDGPTEG A*
358	8409	A	1332	1	1541	

359	8410	A	1333	9	345	YLSEVGVS VGIVIRPRQWIRPEGD PPHG GRLKMDPLRAQQLAAEELEVEMMADMY NRMTSACHRKCVPPPFKEAELSKGESV CLDRCVSKYLADIHGA*WGKKFDRVLL QG
360	8411	A	1334	170	842	EHVYKLPKAKITRPLMLSSARGGAEES ERAEPPLRWAFLLGLGTVVGVDESTAF SWPVCDMCGNGRLEQRPEDRGAFSCGD CSRVTSPVLKRHLQVSLDCRSRPQCRV KVKLLQRSISSLLRFAAGEDGLYSQWLIR SLLRIWKEADRRWVPEGPG*RC*LRDTQ YGFQCFSGATK*RSVFGKEVGLLNCFVQ SVTAHPTSCIGLEEIELLSAGGASAEH
361	8412	A	1335	2	2925	FVLRRRCAQAALPEMPRGSRRARGSKRK RSWNTECPSPFGERPLQGRAGLRTAG AAASLSEAWLRCEGFQNTSGNPASLTA EEKTVTEKHLELCPRPKQETTTSKSTSGL TDITWSSSGSDLSDEDKTSLQQRDELQF IDWEIDSDRAEASDCDEFEDDEGAVEISD CASCASNQSLTSDEKLSELPKPSIEILEY SSDSEKEDDLENVLLIDSESPKHYHVQFA SDARQIMERLIDSRKSPETILHTP
362	8413	A	1336	1	480	NFALEAKNSARAISVVQTPMGHFTED Q/ALTITSLWGKVNVEDAGGETPGKGS LVVYPWTQRFDSFGNLVLLPSCPSMG NPQKSKATWPRKVLTSLGDA\TKHLADD LKGHLLPKPEVNLHLLTSLHVG*GTFKL PGEILLVTRFWAIPFSAKEFHP
363	8414	A	1337	52	454	SQTQREPTMVLSPADKTNVKA/WGMF LSFPTTKTYFPHFDLSHGSAQVKGHGKK VADALTNAAHVDDMPNALSALSDLHA HKLRVDPVNFKLLSHCLLVTLAAHLP FTPAAVHASLDKFLASVSTVLTSKYR
364	8415	A	1338	3	616	PTLLVPTDSERTHPWLLSPADKDQRQGP AWG*G*GSHPPSNVAKTLER\WVLFPPPT PKPYFPHFDLSHGSAQVKGHGKKVA DALTNAAHVDDMPNALSALSDLHAH KLARVDPFNFKLLSHCLLG*PWAAHLPR PSFTPCGCKASLDKFPGLFVEAPLLEPSK LPLKLGSLRLAMLLCPFGPFQPLLPFA PVPPWSLK
365	8416	A	1339	2	390	GWDWNCVWEPHHWLCQSLNSVTQAG VQLCNLSSLQPLPLGFKQFSCSLPSSWD YRNPSLKQQLFSYAILGFALSEAMGLFC LMVAFLISLPCEGAVSTSHSSPASGWPR VFLFLYLPRQPGERGWLVR
366	8417	B	134	1029	2108	MDPLGPAKPQWSWRCCLTLLFQLLMA VCFFSYLRVSQDDPTVYPNGSRFPDSTG TPAHSIPLILLWTWPFNKPIALPRCEMV PGTADCNITADRKVYPQADAVIVHHREV MYNPSAQLPRSPRRQQRWIFSMESPS HCWQLKAMDGYFNLTMSYRSDSDIFTP YGWLEPWSGQPAHPPNLAKTELVAW AVSNWGPNSARVRYQSLQAHLKVDV YGRSHKPLPQGTMMETLSRYKFYLAFE NSLHPDYITEKLWRNALEAWVPVVLG PSRSNYERFLPPDAFIHVDDFQSPKDLAR YLQELDKDHARYLSYFRWRETLRPRSFS WALAFCKACWKLQEESSRYQTRGIAAWF T*
367	8418	A	1340	13159	14007	VLSPLRLKCSGTISAHCNLCPLGSNDSPA SASQVAGITGAHHHARLIFYFIFL R/HESDSVTQAGVQLCNLSSLQPLPLGFK VHSLASASQVAGITGTHRYPLIFVFFFL F/SFLRQSL/DSVAQAGVQWRGLGSLHP LPPGFTPFSCLSLLSSWDYKRLPTRLANF LYF**RQGVTVLARMVSIS*PRDLPTSAS QSAGITDMSHCAQ/LIFVFLVETGFHQVG QAGLE/PPDLKQSTHGLPKCWDYRREP

						PRLA\NFCIFSRDGVSPCWGWSPTSGFK
368	8419	A	1341	1	532	DSGTRDTVLKLLREWYMIISREMFNPMY ALFRTSPGDRVTYINPSSHCHNPNHLSYF KFVGRIVAKAVYDNRLLCEYFTRSFYK HILGKSVRYTDMESDYHFYQGLVYLL ENDVSTLAGYDLTFSTEVQEFVCEVRD LKPNGGNILVTEENKKEYVHLVCQMR MTGAIRKQFG
369	8420	A	1342	1	530	AEADAIQMVREGQRARRQQAATSESS QSEASVRREESPMVDQPSAQTQSI ASDGTQPQGEKEKEERPELPLLSEQLAL DELWDM LGECLEKEEESHQHAVLETH RTVLNQILRQSTTHLADGPFVAVLDYIR VLDVDFVKKRYFRQELERLDEGLRKEDM AVHVRRDHVF
370	8421	A	1343	262	587	PVSKESRVAPLCDFCLPFIQSESSQSEASV RREESPMVDQPSAQTQSIASDGT QGEKEKEERPELP/LLSEQLSLDELWDM LGECLKEEESHQHAVLVLPQA
371	8422	A	1344	1	2502	MTPPHLPRRASDDEFENLRKGPNAVQ LVKTTPLKPSPLPVIPDTIKEVITYDMLNAL AAYHAPEEVGFTSPMLFDERKYPYHLM LQKFLCSGGHNALFETFNWALSMGGKV PVSEGLEHSDLPDGTGEFLDAWMLVEK MVNPTTVLESPLSLPAKLPGGVQNFQF SALRFLVVTQKAAFTCIKNLWNRKPLKV YGGMAESMLAILCHILRGEPVIRERLSK EKEGSRGEEDTGQEEGSRREPQVNQQQ LQQLMDMGFTREHAMEALLNTSTMEQA TEYLLTHPPIMGGVVRDLSMSEEDQM MRAIAMS LGQDIPMDQRAESPEEVACRK EEEEERKAREKQEEEEAKCLEKFQADPL EQDELHTFTDTMLPGCFHLLDELPTVY RVCDLIMTAIKRNGADYRDMILKQVVN QVWEAADVLIKAALPLTTSDTKTVSEWI SQMATLPQASNLATRILLTLLFEIEVRS WSYPPFQDKDHCKKEKENFEAIAAALA AERESKPPVRDTRESQLAHSKDEPPPLSP APLTPATPSSLDPPFSREPSSMHISSSLPPD TQKFLRFAETHRTVLNQILRQSTTHLAD GPFVAVLDYIRVLDVDFVKKRYFHQELER LDEGLRKEDMAVHVRRDHVFEFSYHTA SQSLTHTNDWMYPGFSQAFLSASAFPCR YIVFEGEEGQDAGGLLREWYMIISREMF NPMYALFRTSPGDRVTYINPSSHCHNP HLSYFKFVGRIVAKAVYDNRLLCEYFT RSFYKHILGKSVRYTDMESDYHFYQGL VYLLENDVSTLAGYDLTFSTEVQELITA HPSQSGRSNSQVHLRTSTA

372	8423	A	1345	1	2218	MPQLPGISLPEGVDPSFLAALPDDIRREV LQNQLGIRPPTRTAPSTNSSAPAVVGNPG VTEVSPEFLAALPPAIQEEVLAQQTAEEQ RPELAQNASSDTLMDPVTLIQTLPSDLRR SVLEDMEDSVLAVMPPDIAAEAQAALRRE QEARQRQLMHERLFGHSSTSALSAILRSP AFTSRLSGNRGVQYTRLAVQRGGTFQM GGSSSHNRPSGSNVDTLRLRGRLLLDH EALSCLLVLLFVDEPKLNTSRLHRVLRN LCYHAQTRHWVIRSLLSILQRSESELCE TPKLTSEEKGKKSSKSCGSSSHENRPLD LLHKMESKSSNQLSWLSVSMDAALGCR TNIFQIQRSGGRKHTEKHASGGSTVHIHP QAAPVVCRHVLDTLIQLAKVFPSSHFTQQ RTKETNCESDRERGNKACSPSSQSSSSG ICTDFWDLVKLDNMNVSRKGKNSVKS VPVSAGENKVSEAQANSFGASSTTTAT STTSTTTTAASTTPTPTAPTPTSAPAL VAATAISTIVAASTTVTTPTTATTTVSIS PTTKGSKSPAKVSDGGSSSTDFKMVSSG LTENQLQLSVEVLTSHSCSEEGLEDAAN VLLQLSRGDSGTRDTVLKLLNGARHLG YTLCKQIGTLLAELREYNLEQQRRAQCE TLSPDGLPEEQPQTTKLKGKMQSRFSG GSASSIAAVRQLEAEADAIQMSSESSQS EASVRREESPMDDVDQPSPAQDTQSI
373	8424	A	1346	59	6349	KISQYYMHTPISPHPRLLISPSIAPRKVEW TGLKVKSQDRLFAQQLQVELVALPLVLC LAASALGRSTTSFVSLGQPHAAIQTYSQ KWPTAVSASPFLPLRGSGTGNGSSRIPRE SAPEMATAESLVEELSEDAAGGASPGVE LPALGCSELPAAEVSPASSKNLETICEY AYCMAMLPETGLDPYPKRGFLDLTQERI WTDIPSPGNIPHTHPLMVRHADHSSLTL GSGSSTTRLTQIGRSQRTLRQLTAN
374	8425	A	1347	1	746	MAAAGAFRLRRAASALLRSPRLPARSC RPRPDSITRSPPDVRLPLEKQLKNAINQR GTKGPYIRYYPEVVDHYENPRNVGSLDK TSKNVGTGLVGAPACGDVMKLQIQVG *KRGRFVGC*GFKTFSAVGSANASSLSH LNGVKGKTVEEALTIKNTDIAKELCLS FPWKLALAPMLGLKVAFKAALADYKIE TRTQKKGEAEKKWSPPLGEASSRTPAV PQPAVPVTLDVSGSRLPSPTEGAL
375	8426	A	1348	2	832	SARGSTVAAIICSPRLTPPRTRDAKAACE RLRRVGVEPQLSRGLALFWSPRPNPPEE MSGGLAPSKSTVYVSNLPFSLTNNDLYP DIFQSIGKSL*KVTNQ*KSKRY/HRKEVK GVAFILFLDKDSAQKICARAINNKQLFG RVIKASIANDNGRAAEFIRRRNYFDKSK CYECGESGHLISYACPKNMLGEQ*/RLP KKKEKKKKKKAPEEEEEVEEVESEDEG EDPALDSLSQAIAFQQAQAKIEEQKKWET QFQGVPSNIRMIPRTRIKKSTYFQ
376	8427	B	1349	165	520	XNLKLLDNWDSVTSTFSKLREQLGVPVTO EFWDNLEKETEGLRQEMSKDLEEVKAK VQPYLDDFQKKWQEEEMELYRQKVEPLR AELQEGARQKLLPVLESFKVSFLSALEE YTKKLNTQ*
377	8428	A	135	885	1173	LSQGPRRHSSAVQPPPHSHRGHHHDDCA SPSQVRQNYAINRQINVELYASYIYLSM SYYFDHNDVALKNFAKYFLHQSHHEERE HAKKLMKLLHFD
378	8429	A	1350	3	558	
379	8430	A	1351	3	118	
380	8431	B	1352	28	384	MKA AVLTLAVLFTGSQARHFVWQDEP PQSPWDRVKDLATVYVDVLKDSGKDSV TSTFSKLREQLGVPVTOEFWDNLEKETEG LRQEMSKDLEEVKAKVQPYLDDFQKKW

						QEEMELYRQK*
381	8432	A	1353	2	1093	GGASCCLPRSLWLPSSRFRPCRPGLWV PEVFSRSVPFSSPGCNEWGSTGLLHAEGT PLSQALLLLQVPHGPFRMKA AVLTLAVL FSDG*ARRRHFVQGG*SPPRAAWDRVK DLATRVVPWTVLKEQRTETYSQFEGSA LGKIQNLKAPLTTGDSVDLPPFSKLRE QFGPC*PRDFLGINLGKRETEGP*GKGR* GKDLWKEVKAKVAALTLDDFQERSWQ EEIGAFTROKVIEPLARKNFQEGARPESL HELARRSL SPLGEEMRDRARAHVDALR THLAPYSDELQRQLGARL GALRENGGA RMGQYHA\QATEHLSTLSEKAKPAEDL RQGLLPVLESFKVSFLSALEEYTKKLT Q
382	8433	A	1354	119	301	INDKRKKRPARPGAGGLHLQLCLSQPP QPRGHPAPIPTGQAGPRDSGPGASP*/GR DPPSD*WTPADLGSDPWAGPLTPQEP* GSRWPSSATVSLASTATGTPCTYSHGT GWTQRLWTRGLPLSRDPPSD
383	8434	A	1355	1451	2495	RGLAGNFEDRKS AHYVFQTRGGERRSL ELEAHLEGWSLGLRFLGLKGPPIAQG HFHPSLPISWRGAGVPHSR/SPFPTLGIP G*IFPPKPGRPRGPPRKEDLGPGMVG/R PSGPLPQLPSAVLSADPAGPRPHVPFCEP/ SPSHGVRASPGSKWVEEIGGEEGRQ/PK CRQAFQEA WLMQG/GARGQGLPGS/GC WRINKPSKPSKRGGKGLTCQTFSTNIC*S PPLMPRSLPGPSFILHLISSQQP*SGLLFID PIPEKGRGGLSERWGRAFGDSVACSFQ KPTPGPWEVFEQDAWPNPWP/QGPPPEN FPKGNPSHSRNIHKGDEQSPVRTKTEPT WGGKHSQFASR
384	8435	A	1356	2024	2160	KLCPPR/RCPQPLTPYPC*GVKCPPSEIK YKP*MCPIGCPKPSIQC
385	8436	A	1357	15717	16041	
386	8437	A	1358	41	544	TKLVMMQKLLKCSRLVLALALILVLESS VQGYPTRKPRHQWVR CNPDSSSAHCLE EKGHMFELLPGESNKIPRIARTDLFPKTRI Q\DLNRIFPLSEDYSGSGFGSGSGSGS IGSWFLTGNNGRNYQLVDESDAFQ*QP LGSLDRNLP\SDSQDLGQHGLEEDSMV
387	8438	A	1359	60	401	
388	8439	A	136	961	1051	
389	8440	A	1360	59	420	QQHGRDLWGCRGLIGTDKCVINEMV NRAKRKAGVDPLVPLR/MLGGVVLISGT GSNCRLINPDGSESGCGGWGHMMGDEG SAYWIAHQAVKIVFDSIDNLEAAPHDIG YVKQAMFHYFQV
390	8441	A	1361	80	384	KEHNFVTSVFARGTMGSLTHLLGNSLT EKCKLPSWLPITAEGNSLKGFL/LALTQG KEIQAQNFSSFILMKLRHSSALGGASLL PMDYSANAIAFYSYTFS
391	8442	A	1362	3	124	
392	8443	A	1363	189	242	
393	8444	A	1364	420	557	
394	8445	A	1365	284	362	
395	8446	A	1366	2087	2226	

396	8447	A	1367	1	2956	MNTSQLLEIANQVFNRAAVSLEENRKE NGHQARRNTDLVVSCSNQRQGESLEKL LGRYFYISHLSALAKTMRQRFVTCRHHN ARQGPVPPGIQAYAAPIEDLQAIRNNI TAGVYTPCDIGGNIILCLAYYQRYQTG VVYTPCDIGSIILSTSGCPSHTEPRNLG VSEFLLLGLSEDPQLPVLPLSLSMYLL TVLRNLLIILAVSSDSLHTPMYFFLSNPS WADIAFTSATVPMIVDMQSGVVVSV
397	8448	A	1368	149	1323	PRNEPNSPERRPPLAMDAGVTESGLNVT LTIRLLMHGKEVGSIIKKGESVKRIREE SGARINISEGNCPERIITLTGPTNAIFKAFA MIIDKLEER/DINSSMTNSTAASRPPVTLR LVVPATQCGSLIGKGGCKIKEIRESTGAQ VQGWGICLPNSTERAITIA/GVPKSVTE CVQADFAWVMLETL/SPSPQGRSSWTI PIYQPMASFPSSSCAGGQDRCSDVGG YPHGH*PGKGPLLDGLDFKQHTISPL DLGQA*TRIGKPTSLNVHMMHGGTGF AGIDSASPEVKGYWAKFECIYPKTPHEL TIPNNLIGCIHQADSDLMRSAQMSG QDQKLA/NPVEGSSGR/QVTITGLCCPVI SLAQYLINARLSSEKGMGCS
398	8449	A	1369	2	125	
399	8450	A	137	2	804	SSGFPASTVLGRNPALVPHGRPPIASPPS PLHRTLGLPQGRRRSSAAQPPPPAAASP LVAAMKTAVPPRKVRQNYHQGLKRAA HQPARNPGSSTASYVLPMSYLLLRD DGG*RTFAKYFLHQFSMKEEGNHAEK T**KLAEPNEGGNLSFKDIQEPDCSDW GERGLNAMECALHLEKNV\NQSLELH KTGPLTKMTPHLCDFIETHYLNEQGES HQKNLGDHVTNLRKMGAPESGCAEY LFDKAHPWGDSDNES
400	8451	A	1370	18	1374	LAEQIVPRGVGIRPPDKADQAPCRSPIRT PAPESWHCDRQRFRQDSSRMKMRVLG LVVCLVLWTLHSEGSGGKLTAVDPETN MNVSEIISYWGFSEEYLVETEDGYILCL NRIPHGRKNHSDKGPKPVVFLQHGLLA DSSNWVTNLGNSRLGFILADAAIDVWM GNTRGNTWSPKHKTLSVSQDEFWAFSY DEMAKYDLPASINFLNKTGAEQVYYY GHSQGTIGFIAFSQMLELAKGLKMFFA WGPVASVAFCTSPMAKLGRLPDHLIKDL FGDEEFLPQSAFWKVAGVPHLATHVILA KELCGNLCFLLCGFNERNLNMSRVDVY TTHSPAGTFVQNM*HWSQAVKFQKFQA FDWGSSAKNYFHYNQSYPTYNVKDML VPTAV*VGHDWLEDVYGVNI*LTQIT NLVFHESIPEWEHLDFIWGLDAPWRLYN KIINLMRKYQ
401	8452	B	1371	77	471	ANREKMTQIMFETFNVPAMRACPSTPPE DHRHRAGLRVRVTHNVPIYEGYALPHAI MRDLAAGRDLDYLMKILTERGYSFVTT AEREIVRDIKEKLCYVALDFENEMATAP PPPPWKRTSCQTGX*
402	8453	B	1372	101	391	MCDEDETTALVCDNGSGLVKAGFAGDD APRAVVPSIVGRPRHQGVMMGMGQKDS YVGDEAQSKRGILTLKYLIEHGIITNWDD MEKNGPHLLHEL RV*

403	8454	A	1373	92	1323	LPAQKLDTCDEDETTALVCDNGSGLV KAGFAGDDAPRAVFPSIVGRPRHQVM VGMGQKDSYVGDEAQSQRGILTLYKYPV EHGIITN\WDDMEKIWHHTF/YTNELRV GFPKEDP/TTLA*PKAPLKFPKANREE/M NEPQIMFETFNVPAMVVAIQAV/LCSLY ASGRITGIVLDSGDGVTHNVPIYEGYA LPHAIHAPWTMAGRD\LDYLMKILTE RGYSFVTTAERIEIVRD\IKEKLCY\VALD FENEMATAAIHPS\LEKSYELPDG\QVITI GNERFRCPETL\FQPSF/LSGMEVGGAFH ETT\YNSIMKCYIRHPGRTFYANNVLSG GT\TIVPLGFADRMQERDSPAAPQHP* GSRIHSPPPERKIYSVWIGGFHPWRLST SQQKW/VSPKQEYDEAGPSIVHRKCF
404	8455	B	1374	53	302	MTSALTQGLERIPDQLGYLVLSEAGLA SSGDLENDEHAASAMSELVSTACGLRLH RGMNVHFKRLSVVFGHTLLETRVLTEX *
405	8456	B	1375	277	573	TSALTQGLERIPDQLGYLSSGDLENDEQ AASAISELVSTACGFRHLRGMNVFPKRL SVVFGHTLLVTVSGQRFV*
406	8457	A	1376	209	413	EAGRREAELGSSPPLPVPPPRAGAGA HQTGA*RAHSMPCSRKPAVLTSSSEM ALAACSSFSRSPDDASTAPSLSTR*PSTTT KGRGRGSPDRRLKGTFAAVQPETAGC ADQLRDGTGCLLILQVPR
407	8458	A	1377	116	1253	NPGPVQVGVEGGQEEGPSSKKQAKTRQ WSPASITEAPGPKIRFSEPLRPPAGCRHQ LASRPRVLP/PSPQTPFCPG/PPSPSSVCSP KDHWRDTPDRRLKGTFMPCSRKTAG CAEQLQRWHWLPAAHSPGPQMTALHL HSVPGSRAGLGFAAPGSAQKSSG*RCK S*EAC*RDGRPDTLHLQTQVSGLTWPQ VFSFSPQVPSRPPPYMVLNTDLPEPPSA PTLAPRLPWPSTSHLCYPKGPVLPWPPLP SDPSSPPFVSARPA/ALPAAPHPPTDPSP AFSSPSLPFSPSPPRADRR*GWSAGPPG G/EPHRLGSRDAEPPAGPLAHASSLTIAV FGAGGAPYQIGSFRLQAPVTCLQLRSSF CLRHWPLAPPLA
408	8459	A	1378	24	364	PTEY/ENL/FPCIKEAF/VVEEWVKETLAV L/WPAKQYPFVTPIEERILMEEGKAFPPSR STAKQKLDGNPVSPTPVIGLSPTPNKEE KHLNLCPFPTGHLDGARDTAGPSWLH HRF
409	8460	A	1379	24	2858	VAGNKRGFPGLDRTMPLRLDIKRLTA RSDRVKSVDLHPTWPMLASLYNGSVC VWNHETQTLVKTFEVCPLPRAAKFVA RKNWVVTGADDMQIRVFNYNTLERVH MFEAHSYIRCIHVHTQPFILTSSDDMLI KLWDWDKKWSCSQVFEGHTHYVMQIVI NPKDNNQFASASLDRTIKVWQLGSSSPN FTLEGHEKGVNCIDYSSGGDKPYLISGA DDRLVKIWDYQNKTCVQTLEGHAQNV CASFHPE
410	8461	A	138	3	402	HGKIFYFILFYFYFFIFLRRSLALSPQVRT ADCS\GAISAHCKL/RLPGTFPS\CLSLPS SWDYRRP\HPRANFFLYFLVETGVSPC* PGMGLDLLNS/SIPRLGLPKCWDYRREP PRPVETFFLKAENVRVNYI
411	8462	C	1380	110	508	
412	8463	A	1381	93	180	
413	8464	C	1382	128	382	MYLGISRRLLSMLTFLAYLHPRERPPHR APXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXQQAQGTGISIPRTCTST GL*
414	8465	A	1383	3	140	

415	8466	A	1384	1	609	
416	8467	B	1385	1	690	MASWDEKDLTVQPDTRKGSVLRGCLS SRALRWAGRGHVAAGWRPLAPESAGG WGMAAAMVPGRSESWERGEPRPALY FCGSIRGGREDRTLYERIVSRLRRFGTVL TEHVAAAELGARGEAAAGDRLIHEQD LEWLQQADVVAEVTQPSLGVGYELGR AVAFNKRLCLFRPQSGRVLSAMIRGAA DGSRFQVWDYEEGEVEALLDRYFEADP PGQVAASPDPTT*
417	8468	B	1386	1	975	MSPPGREQGLLLNLLRPSGLDNAGKTTI LKKFNGEDIDTISPTLGFNIKLEHRGFKL NIWDVGGQKSLRSYWRNYFESTDGLIW VVDSADRQRMQDCQRELQSLLEVGVGS SYPLCTWRFFSYLRIEQMYNLVLYRDIQ FPDFCFNSNTDWSKGLKTHARFGNTSLH VAHTDSTNTTNFVDVWRGRTKSLACLL QLSSLTCIYTAGKMRLQDRIATFFPKG MMLTTAALMLFFLHLGIFIRDVHNFCTY HYDHMSFHYTVVLMFSQVISICWAAMG SLYAEMTENKYVCFSALTILMLNGAMFF NRLSLEFLAIEYREEHH*
418	8469	A	1387	25	353	EVCYYRSSEAFFSELIKVILRHLCVAGK GLCSIPQLNTREGSVLRRISKRGSPHAVEI EEGHCLACLPLGTECLGIKPIVHLLNSEIG EKPPFSPSPCSSAAFLLLR
419	8470	A	1388	79	467	RPESQRANGVDSGPNLKTVPQPDTRKGS VLKWKSRGKPLAVEIEESHCLCLPLRTE CLGIKPIVHLFSCTRPVIVPSLELHYDIDS IAHMFVADLLLIITLLSYYIPFYLGFQNA ITGINHRAWFY
420	8471	A	1389	368	611	LCPSHFAPTTLTQSGSSLKTCVVLNSRFK ACRAVPGPCLVNQMFASSILGKSHHSL VPINQGHNALWKAAGPLPLKAGY
421	8472	A	139	210	1640	DPARAGTGVGASFRGATWQQGQGRGS ACSCTQCPPATCLLTGADAPTSRPWSLL SRLLGHCFSVLTVPAAAPPPPGSL/PEPPR AGPQCP*TRPPLR*PGCSHLAGPHSGSPR PCSLLGASATLYGFRHFLAGPAAQGGGQ AVGSQGDHPTRAQPP*WSSPQTPLNLSA AQEFEPRTGTCPTRW*SRPDALPWRPW EPWSG*AEGWEQE*WRLQPQGTAPRA TSSGYSGSSRGQRARPGPARCGDGGGA GRCGHVVRGRWRQLGHRP/RGSSAPAVC CGTLSAAPPQPQHSLSL*SSAPGPQWCP HWHPPQSGRQG*/SPLPPPPGPARPPCAPC SGSPSA*GGCTPGCPTAP*GRRQGRWR*P RTGRLSPLGHLPGCRSQAASVSHHRCWPL LPPPRPSPGPPPLRSGSSPGG/PLPKGC*C QGGERPQQHKEAGQGAQQTWLHPQ APGGRRPSHTGWGGGAPGG*QRRNLA* RPLLP
422	8473	A	1390	441	1178	FVALPOPLCPSHFDPTTLIQSGAHKNMC CIKSRFKRDLGLCRTCLVNKMFTSSILGK SHCHSLVSINQGHNAWKAAGPLPFRA GYCQGFSPCDSLKYGSWDEKDLTVQP DTRKGSVLRWISQRGKPLAVEMEEGHC LACLPLGTECLGIK/PIVHLFNSEIGENRP VMVGGVRHVLQ*CCLG*FL*LPLRCLGGE KHKSGL/HVHIPVIVLSLELNYDIDSFAH MFF/SVDLLLIITLLSYYIPFC

423	8474	A	1391	3	1078	TRAAGLRAGVRVPRSPGPSRRMPARSGA QFCRRMGQKKQRPAPARAGQPHSSSDAAQ VAPAEQPHSSSNPAQAPCPRECLGPPTT PGPYRISYFSSPKGHLTRLGVVEFFDQPA VPLARAFLGQVLVRRLPNGTELGRPHR WETEA/YTLGPEDVEAAPLQGGWPGKTP R\NRGMFH*KPGD/LWVVYIYGYFCM NISSQGDGA\CVFL\RALEAPGKSWRPMR QLRS\TLR\KGTRQARVLKGPPLCSGPIS KL\CQALPINKSF*PEGTLAQDEAVWLE RGPLEPSEPAVVG\APRVGVGHAGEWA RK\PLRFYVRGSPWASVVDRAEQDTQ ACAKGLPRQDFLHCLKTRJNVLFLEKKK KK
424	8475	A	1392	3	452	
425	8476	A	1393	26	493	NSTDSETHPWLLSPARQRPTSRPAWGK VGAHAVRSMCAEALERMFLSFPT\TKTY FPHFDLASHGFCPG*RATGKKVDDSDAQ TPWPTWDDMPKRRCPP*SDLHAHKLS/R LDPV\NFKAPKATCLAG*PLAAHLP\AEF QPLAVARLPWGQISWGFC
426	8477	A	1394	1	409	
427	8478	A	1395	9	817	HGSSEQEEDKNNQSATPIHSGPATM NSIG*YPTQPTYPVQSPGNPVYPQT\NLN\A PQAPPYTADAPPAYSELYRPSFVHPGAAT VPTMSAAFFGASLYLPMASVAVGPLA GSTIPMAYYPVGPIYPTLAPQVLGGKG GYDAGVARFGAGA\NGGNIPSPPGICPP WAAQLAVMQGANVLVTQRKGNFFMG GSDGGYTHLVRNQGHLCAREKTSHTLQ HFSQCNCFSHINLKLQFRHMLLGCLSGA QTRHFSNLIRNHVMVAVPP
428	8479	A	1396	1	367	
429	8480	A	1397	625	2919	
430	8481	A	1398	2	76	HHYAKLGTRAVRRARRCAGWQSYVDN LMCDGCCQEAAGYCDAYVWAATA GGVFQSIPTIEIDMIVGKDRKGF\TSGL TLGA\KKCSVIRDSLYVDGDCTMDIRDK QS/QGGEPTYNVA\VGRSGRALVIVMG KGKVFHRRHTLTRKAYETPLYT*RQAW HEGSAKGSKMCRLAELRG
431	8482	A	1399	149	421	
432	8483	A	14	79	533	SSIMTFLESSAVPPHWTGQDGRVCWTG WIPQCQAGSAPE/RS*VFINSAGQKSADT GWSSSKPQN*HLSSFHQAVVGMIPSHS QFLMKRKAASPRKLEWEH/LQPLHPMTL LYR*DGKPPR*VLLSTYTYCSSRDRPKSS GKNARRFPAHGSS
433	8484	A	140	885	1173	LSQGPRRHSSAVQPPPHSHRGHHDDCA SPSQVRQNYAINRQINVELYASYIYLSM SYFFDHNDVALKNFAKYFLHQSHERE HAKKLMKLLHFDC
434	8485	A	1400	1	1107	
435	8486	A	1401	25	1486	GPQQPHSRSTHASGRPQSLSPVLSLSPDS MSFTTRSTFSTNYRSLGSVQAPSYGARP VSSAASVYAGAGGSGSRISASRSTSFRGG MSGGLATGVAGGLAGMGGIQNEKET MQSLNDRLASYLDRVRSLETENRRLES KIREVHLEKKGPQVRDWSHYFKNEDL\R AQIFANTCGTMPRIRSARIDNARLAVAD DFRVKYEDRSWPMCPVLWRTDIHGLPK VH/IDDTNYHTDLQLETEAEALKEELLFQ *RRNHEEGS*KALRRQ\SSSGMNAWRL D\APKSQDLAK\IMADIR\AQ\YDELGSKK NPRGSLDKY\WSQQNEESTTGGSPQKSA EVGAVETHAHRSLKRTVPVLRSTLDS MRNLKGQLWRTSLREG*RPAYALTRLE PAPTGSL\HLESEL\AQTRARGTAARPRE

						YEALLNLIKVKLEAEIATYRRLLEDGED FNLGDALDSSNSMQTIQKTTTRRIVDGK VVSETNDTKVLRH
436	8487	A	1402	36	389	
437	8488	A	1403	204	433	
438	8489	A	1404	3	392	
439	8490	A	1405	1	1314	
440	8491	A	1406	2	279	
441	8492	A	1407	3	1462	TSCSSAAPFAAALARDPNPASPLPEHRPR LHRGPGPPARLAAAMADPKYADLTGIA RNDPDVYETSDLPEDDHAEFDAFAQELE ELTSTSVAEHNVPNPAAAYDKFKDKRVG DKGI*FSQIVLGKTKRTGYESGEYEMLGE GLGVKETPQQKYQRLHEVQELTTEVEK IKTTVKE\$AAEEKLTPVLLAKQLAALK QQ/VWVASHL/EGKLLGPDAAINL\TDPD GRPGLRRLLLQ\LEATKNSLGSRGKTPG TPPD\SSLVTYELHSR\PEQDKFSSSLPKS QKLEKRL\TEL\ETA\VTLLIQDAQNPLSAG LQGACLMETVELLQAKVSALDLAVLDQ V\EARLQSVLGK\VNEIAKH*SLC*EGAG YTKARLHQLIETIT\ALGAPLSTLPGAGC RRLVTHQSSLHEASPCQFGQLLDT/HLDT TQPMIANFLGRTNTNPL*PQVADKPLRE NLAHQKGNFAQQ*RNG*KKLGKSEAH LGKLEPPGG
442	8493	A	1408	1	4629	
443	8494	A	1409	96	721	PGQLSSLTPPRPASLLPWRAAYLFLFLP AGLLAQGGYDLPLPPFDHGQYTHYM DQIDNPDYDYQEGTPRPSEGQFQFQS QQEVQQGVIPSPNPRAQGNAEL\EPTEPG PLDCREEQYPC\TRL\YSIHRPCK\QCLNE VCFYSLRRVYVINKEICV\RTVCAHE\EL LRA\DLCSGTSFSKCGR*WASSGLACQSV AASCA\RSCGSF
444	8495	A	141	170	737	IVTATCLWGSVLTHSVFPFQSYFDRD DVALKDFAKYFLHQSHEERGTCRLNLM KLQNPGR\GLIFLQDIKVNKRS*GCHTSSS GSVRVSEIT*TSNCPYKVMHWAFAFCA FLGLPSKLN*ANSNVFFAKTWWLEMMG LLTSRLVGRDALTYSHSKPDCDDWESG LNAMECALHLGKNVNQSLLELH
445	8496	A	1410	118	256	MFCFFLKPIAEAPFKFDMELDDLPEKEL KELIFEETARFQPGYRS
446	8497	A	1411	457	839	AVGGFWGCPRVELHMLVHITPLSHFKC GCFSNHVPCRLI*QRGTLRL*MRKYTILF PSTACQHLKFIFQPTV*QFVIKPPGAHDV KHCSVLKYSNISDTAESDCQKKLSTNSC LELYPYFTDLFKYL

447	8498	A	1412	310	1784	RRRPRQPTMAAAVVGGRPEVWSAGTL FDVGPRYTNSYIRRGRLTTCVCSAYDN VNKVRVAIKKISPFEBQTYCQRTLREIK ILLRFRHENNINGINDIRAPTIEQMKGCI* *YRDLMETDLYKLLKTQHLASNDHIWYF LYQILRGLKYIHSANVLHRDLKPSNLL LNTVTCDLKICDFGLARVADPDHDHTGF LTEYVATR WYRAPEIMLNSKGYTKSND IWSVGCILAEMLS*QGSPFQGHYLDQ L\NHIFGVFLGSPSQEDLNCIKF*KLGN LLSSHTSKIMVPLEHACPQNADSKSSGTL LGQNCLTFNP\HKRIEVEQALA/HTPYLE QYY\DPSD\EP\AE\PIQVRPWKLDLPKE KLKGTNFKRLARFQPGVQILNFVQTK GSEGLDVLRHRCSSSQFLTPGPVFQPCLG LSTLTPLNPFGRGRFLGSCGFYGFSGISFS PGGFLGQPCCCVHPLVTLRAVCTSVHL TAYCCFSH
448	8499	A	1413	2	294	GNKMAAPKGS LWVRTQLGLPPLLLLT ALAGGSGTASAEAFDSVLGDTASCHRA CQLTYPLHTYPKVGPVRSGLRPFPCSPFL GSPHVCRLWQPGC
449	8500	A	1414	366	1412	QRGTRWRRERGS LWVRTQLGLPPLLLLT MALAGGSGTASAEAFDSVLGDTASCHR ACQLTYPLHTYKKEELYACQRGCRIFS ICQFVDD\GIDLTRTKLECESACTEAYSQ SDEQYALPFLGCQNSACHFAELRQEQL YVPRWP\KMAPTFFL*LLGEGSFWELT*W DSAQSFITSSWTFYLQ\DDGKIVIFPV*S QKSQYAPHFGAREPTNFEENHLLSKMSS DLQMGKFHQAHQGIFLKNEERDGLFKK PSILNSGWILTT\TLVLS\VMVLLWICCAT VATAVEQYVPSGEAGVTMGDLEFMNEQ KLNRYPASFS\CGLVR\SKTE\DH\EEAGPS YLPKVNLA\PFLEI
450	8501	B	1415	76	384	MSGWGVLSGRLNPAAREKDVERFFKGY GRIRDIDLKRGFGFVEFEDPRDADDAVY ELDGKELC\SERVTIEHARARSRGGRG RYS\DRFSSRRPRNDRRNAPP*
451	8502	A	1416	3	229	
452	8503	A	1417	152	536	PDIMSGCRVFIGRLNPAAREKDVERFFK GYGRIRDIDLKRGFGFVEFEDPK\ADDA VYELDGKELC\SERVTIEHARARSRGGR GRGRYS\DRFSSRRPRNDRRNAPPVRTEN RLIVENLSSRVSWQVC
453	8504	A	1418	771	1383	ILIEYKCGKCHVCTLSNIFSFSSLVFFISCD CLCVFPPLCLTQLSCVKDLKDFMRPAG E\VTFA\DAHRPK\NEG\VEFASYGDLK NAIEKL\SEKEINGRKIKLIEGSKRHSR SRSRSRTRSSSRSRSRSRSS\KSYSRSR RS\RSRSDVPVLLSRSPRA*EEPRNRGS SSRSKSPASVDRQSRSRSRSRVDSGN
454	8505	A	1419	236	1377	PDIMSGCRVFIGRLNPAAREKDVERFFK GYGRIRDIDLKRGFGFVEFEDPRDADDA VYELDGKELC\SERVTIEHARARSRGGRG RGRYS\DRFSSRRPRNDR/RVCEGWMAA LNNYW*G*PFKIQESLAVMILGPAV*SVL LFPR*PIVLDESI*VIEHKSIDGSH*NGL*Y LMA*TCPQLNTSAVIAFLPL*IRIFFLNA PPVRTENRLIVENLSSRVSWQDLKDFMR QAGEVTFA\DAHRPK\NEG\VEFASYGD LKNAIEKLSGKEINGRKIKLIEGSKRHS RSRSRSRTRSSSRSRSRSRSRKSYSRSR SRSRSRSRKSRSVSRSSPCPEKS\QKRG S\SR\SKSPSHLWNRPEVPGPRSRSQIQLD QWPIKPVK

455	8506	A	142	1	809	VVGVSFCNSAWTEPGARSPPPRAAHSQP SVTSSPHPTAPRPPPLQRREATAAGR LSLVAAMTTASHLAGCAKNYHQGLKRP PINRQDQPWKLYGLLRFTLSHVLTNFDP RMMLAFERTFAKYFLHQFSMKEEGNHA EET**KLQMQRGWPEFFLAQDIKETQTC DWEERGLNA\ME\CALHL\AEKNVESH LELHKTGQLDKNDPPFCVTFIETHVYLN E\VKGHQRIWGDHVTNL\ARKMGSA PNLA WAKYLFHDHSTSLG\SDNES
456	8507	A	1420	568	770	PDIMSGCRVFIGRLNPAAREKDVERFFK GYGRIRDIDLKRGFGFVEFEDPRDADDA VYELDGKELCS\ERV\TIEHARARFTRLGR GRGRYSDRFNNSAELRNDRRNAPPVRP\ ENRLIVENLSSRVSWQDLKDFMRQAGE\ VTLPDITRLNL\NEG\VEFASMGDLRNAI EKLSGRELNGRKIKLIERPAKRPQ*VQQS RSSDPGTQKSPGPRSRSPSPVANLNSR SKK\RRGSREPGSPEPSRSC*VGSSPV* ERFFKGYGRIRDIDLKRGFGFVEFEDPRD ADDAVYELDGKELCS
457	8508	A	1421	1	1317	
458	8509	A	1422	1	816	
459	8510	A	1423	19	2867	PPDPLPGLPCPPGGPPLPAFGGGWGGAR GSHWSSRACSRRRRLVHAPRAPLLPR AAAEKAKRPAGARQMGLKARRAAGAA GGGGGGGGGGGAANPAGGDAAGD EERKVG LAPGDVEQVTLALGAGADKDG TLLLEGGGRDEGQRRTPQGIGLLAKTPLS RPVKRNNAKYRRIQTLIYDALERPRGWA LLYH\ALVFLIVLG\CLILAVL\TTTKEYET VSGDWLLLLETFAIFIFGAEFALRIWAAG CCCR
460	8511	A	1424	2	508	PDSSGPHRLRENPPMVAVSCPTKTNVKG PPGGKVGAHAGIEY\G\SEALE\RMFLSFPT VTKTYFPHFDL\SHGLCPRLKGHGKVA DALTN\AVAHVD\MPNGVVRP*SDLH\ AHKL\RVDPVNFKLLSH\CLLVTLA\AHL P\AEFTPAVPRPPWDKFPWLSVKHRCLT FKYR
461	8512	C	1425	257	358	MILLVFLPXHQVFLERXQSEILHHLNTL ADVL*
462	8513	A	1426	64	467	PAAWLPILVAARQLTVQMMQNPQILAA LQERLDGLVETPTGYIESLPRVVKRRVN ALKNLQVKCAQIEAKFY\EEVHDLQRKY AVLYQPLFDKRFEINAIYEPTEECEWK PDEEDEISEELKEKAKIEDEKDD
463	8514	A	1427	1	795	
464	8515	A	1428	1	836	
465	8516	A	1429	1	410	ARAKTYRMRSEPDSDPFPDGPPEIMGC TGCQIDWKKGKNVTLKTIK\KKQKHM RGTVRTVTKTVSNDFFNFAPPEVPES GDL\DDDAEAILAADFEIGHFLRERI PVS VLYFTGEAIEDDDDDYDEEGKSG
466	8517	A	143	776	1115	APGVDPKPRQQNE/IPVSTKNM*LGVD CLRGLRQEDHLNQEVPGCSEP*CHDQAT ALPAWATQQDPVSKKKKKKWWREARK GKQP*GDGEKDSTTHSWL*RWRSLKSRI TVSL
467	8518	A	1430	502	765	LQKQKQANKQQIT*K*ACQMV/SNSSFP GKQKVDPTTKRCLVNGGLNLKIQ/LIQ ANF*KSRFIHLTVVPVTILSQVTLQLTMS PKTQ

468	8519	A	1431	58	1335	VTACAAPAAWLPILVADIWSSYNMADID NKEQSELDQDLDDVEVEEEETGEETKL KARQ/LTVQMMQNPQILAA/LQERLDGL VETPTGYIESLP/RVVKRRVNALKNLQV KCAQKETQFYEEVHDLERKYAVIYQPL FDKRFEIINAIYEPTEECEWKPDEEDEIS EELKEKAKIEDEKKDEEKEDPKGIP*IW/L TVFK/VNDLLSDMVQEHDEPILKHLKDIK VKFSDAGQPMFVLEFHFEPNEVFTNE VLTK/LRMSSIPD/SDPFFF*MEPEH*G CTGCQIDWKKGKNVTLKTIRKRPKPQG TWGQFRTVN*NQFPNDSFSNFFCPLLKFL ESED/RND/DAEAILAADFEIGHFLRERIIP RSVLYFTGEAIEDDDDDYDEEGEEADEE GEEEGDEENDPDYDPKK/DQNP/AECKQ Q
469	8520	A	1432	1	645	PLKRSDGCNDGRPTRPPTRPDTTVFTSNL KQTL/VH/LTPVEKSAVTALWGK/VNVDE VGGKALGRLL/VLPWDPKRSFQSP/LGE SVPTP*MAKEKVLGCPLVVG/LASPGTTL KGHLCPHWSELALLTSLPRGIPEELQGS WGKRAGSCVAWAQSTFGQKNFNPKNL QGLPNQENWLAWCWLNALGPTSNHLSL AFLAGPISN
470	8521	A	1433	240	461	
471	8522	A	1434	2	206	
472	8523	A	1435	2940	3296	
473	8524	A	1436	189	736	ENKISSVFKADFLPPAPCSLPGLEVS/SVP KGKNTSGRESGFGWAIWMEGLVFSRLSP EYYELARPHLRDEEKSCPC/LAQE/GPQ GDLLTKTPELGP*ITRTCLTIVQKT*RK MVDKPTQRSVSNAATRVCRTRGRSRWR DVC/NFMRRYQSRVTQGLVAGELAAQ NLVSTSR/LCIPSTGPL
474	8525	A	1437	3	452	
475	8526	A	1438	3	485	PTLLVPTDSERTHPWLLSPADK/VNVKGP PGGKVGAAHAVRSMCAEALERMFLS/FPT TKTYFPHFDLSHGSAQV*GPRARKVAD ALATNAVAHVGRTPNALVPPLSD/LHAH KL/RVGPGSTFKLLKATCLAGLTLAAHL PARVQPLAVASLPWDKVS/WASC
476	8527	A	1439	217	474	RTCASLKS/LHRPHGSHGHGQRGGFL*VF SSSF/DSSDGVWQVCSPPGQIPPTCP/HCC DPESP/DSSSGPPVPWHLPCA/VQGPSPGGL
477	8528	A	144	1	419	
478	8529	A	1440	569	737	REHPVAGLQEHLQGGGSGQD/LRG*WA YFS/HR*SRKVPTSW*RRWKM/VAPWAA RRV
479	8530	A	1441	520	1319	SWPQVPKTNKIEPRSYSIINTSCG/VRLGP ALNTLIFSK*NASGPAGHSAKSIEGAPRG KGRGRAVARLAADRPPAPKIQLPSFV/LR STL*YPLLELELPRLLATHLPSNGS/LK/ DLKWT/HSNYRASKEP/CIVIFVTTSPGR EWWICAPAAFLG/CGSRFSGSPLPE/SNP* FPV/TRGHHGRHGDYHRKLIGQTFE/WV VRRHGGRAIGPRLSRVTKAAGARPPAG AGEG/LDRVGF/DLINA/PSPPAKGV/SARR HVLAL/ELPQLSK
480	8531	A	1442	2	239	RKTQTTRRGPLWAGPGG*RGGW/SR RLLLAAGFLGTHPGSTHPGLQQPRFKWD HTRSSQGA/FITFFPRGGQEHSFTS
481	8532	A	1443	234	491	

482	8533	A	1444	126	890	PRSIGEGLGPSLLCGSGRARFSSGGMSP RLVVLSPSGAIGKSTLLKRLLEHSGVF GFSVSRESRALVEGVTTRNPRPGEGRQK ITYFVTREVMQORDIAAGDFIEHAEFSGN LYGTSKVAVQAVQAL*PHRVCLDVDL QGVNRNIRPTDLRPNLHLLFSPPTATCW KQPGFRQPQLETEGRAWLKAGLLLAQ ADMEEPAKEAPALFDVVHPLNDQPGT QA\YAEKEALSEEIKKAQRTGALRLAV CSR
483	8534	A	1445	978	1440	AGVGVRGTTGRLVVRKFLTIFGNPLFL VAPPKPHSEWSQRLTYRRRPSYNTAIS NKTRLSPNDGNRICLPFIPKKVGKAPQS LHVVCAPGRLRGVRAVRPKV/LL*RLSK TKKHVSRAYGWFHCVLKCGRDRKACF SLIGGSRKIRCGKSV
484	8535	B	1446	43	674	MDWTWSILFLVAATTGVHSQVHLVQSG AEVKKPGASVKVSCASFNSFDTYGFN WVRQAPGQGLEWMGWVSANFGDTNYI RKLQGRVTMTTDSSTSTAYLELRSLKSD DSAIYYCAATNSDKYFWGQGTLVTVSA ASPTSPKVFPLSLCSTQPDGNVVIACLQ GFFPQEPLSVTWSESGQGVARNFPPSQ DAFGDLYTTSSQLTLPATH*
485	8536	A	1447	3	1637	SPGIFRGFSQSVIRTEQRELTMESGLNWLL LVAVLKGVCQEVQILESGGQVQPGGSR TLSCAASGFIFSNYVMTWVRQAPGKGLE WVSTAASGANTFYAESVKGRFTVSREN SENMMYLQMSLRDEDGTGIYYCAKDGD VPNLGVAWIVAGPGNVRPRKWFDWAG QGTTVTVSSASPTSPKVFPLSLCSTQPDG NVVIAISCLVQGGFFPQEPLSVTWSESGQ VTARNFPPSQMASGDLYTTSSQLTLPAT QCLAPKSVTCHVKHYTNPHPDVDG\PCP VPSTPPTP/CSLNSTYPISLMLPPTVTAPT GPSKDLFLGSEANLTCTLTGLENASGCH FQSEGLQVGKSAVQGP\PEA*PSVAAYSV VQLSCRGWREAMEPLVRPFTCTAALPRS PRTRANRPSSSKSGKHISGPEGPPCCRPPS EELALNELVLTCLARAFSPQGPCWVR WLQGSPLPRKST*LG/PPAGAQAARAP TTFVTSILGR/VQPEDWKKGDTFSCMA GHEALALAFTQKTIDRLAGKPTHVNS VMAEVDGTCY
486	8537	B	1448	113	249	XAAMTTASTSQVRQNYHQDSEAAINRQI NLGALRLRLRPVHVLLL*
487	8538	A	1449	846	1193	VMGPKPLPGIVPEFLKNWPRPSGLLIEFC PHWDTTDMTSN/CLV*EENYSEQCLELL NPVGMDLILRGDCESYHGHPNRKLGS QHLSDQAALTGRLSSPCLMKRRRSASFR FTQAG
488	8539	A	145	3	1363	HASGITMAAGTLYTFSVNWRAFALIA AQYSGAQVRVLSAPPHFHFGQTNRTPE VLRKFPAGKGPAFEGDDGFCVFESNAIA YYVSNEELRGSTPEAAAQVVQWVSFAI DSDIVPPASTWVFPTLG\IMHHNKQAT*E CKGRK*GRILGLV\DAYLKTEDFCWGAN VERLSGITV\CTLLWLYKQVL\EPSFRQ AFPNTNRWFLTCINQPP\PAVLGGSETC VRRAPFGA*KVLQRPQPKK\DTPRKEE GFTGKKKQKPAERKEEKAAAPG\PEA EEMDECEQALAAEPKAKDPFAHLPKSTF VLDEFKRKYSNEDTSLVALPYFWEHFDK DGWSLWYSEYRFPEELTQTFMSCNLITG MFQRLDKLRKNAFASVILLGVTNNSSIS GVWVFRGQELAFPLSPDWQVDYESYTW RKLDPGSEETQTLVREYFSWEGAFQHV KAFNQGKIFK

489	8540	A	1450	2	1087	AIEHCQSGDNPESTRRGFLQQLGRNPA LVPHPGRTGHSQPPVTFHRHPSDCQRSP AGRFKGGPSHRGQPPFHKSPPMTTARP TSQVVRQNYHQDSEAAINRIQINLELYA SYVYLSMSYFDRD\DV ALKNFAKYFL HQSHEERIEHC*ENLMKACRTNEGWPNL SFQDIKETKTCD\WESGAECQWKALH LEKNVESSHYNLHKL\ATDKN*PPICV DFI*DTFTLNEQ/V*KAIKRIWGDH/V*PK LWRKMGSAPNLGFGEYLF*QSTPWETV IMKAKPRANFPNSRGVTFVLTKAVHAC WGFLYLFYKLYQNIHLSSLICIPSNEI WYPGVVFEVLDESEIYPGYLPDLSAVV QF
490	8541	A	1451	24	452	APSPDAMG/HSLWGKVNVEDAGGETLG RLLVVYPWTQRFFDSFGNLSSASAIMGN PKVKAHGKKVLTSLGDAIKHLLDLKGT AQLSELHCDKLHVDPENFKLLGNVLT LAIHFGKEFTPEVQASWQKMTGVASA LSSRYH
491	8542	A	1452	41	542	APSPRRPWGHFTEED\KATITSLWGK\VN VEDAGGRKPLGKAPWLSTPWTQRFFDS FGNLSSASAIHGQTPKVKAHGKKVLT LGDAITKHLDDLKGTFAQA*SELHCDK\I LHVDPENFKLLGNVLT\VL\AIPFSAKE FTPEGCRASWAERWVTWSWPVPCSSRY H
492	8543	A	1453	1	1233	
493	8544	A	1454	233	884	ESPGVGCSARRGPRRSPGPPPAAPGTPR PHGIPLYTRAGHQ**GEIRRRPCTFISKFL RPQGGASERQLPDLQARAWQELLGRPF NKH\HWFP*SPCKGIGVTRCIRINP*KW IPLIGPGQHSAILSSQELFRLL\SELATL WG*PIEVSYRIGEDGSHLCACMKPSPA GGSTQNTQNVQM\DSRISCKEELLG RTEPFKTTNMMTVSG
494	8545	A	146	3	452	AVPGPGFGLSPTMVTLAELLVLLAALLA TVSGYFVSIDAHAECEFFERVTSGTKMG LIFEADGGFLDIDVVITLPDR/RKIKPRLL KKKGQ*TYRSFMDVTFKLCYNLRMSW MNPNI RNHNH\WLLTSIKFLITQFRSSLS YLSSCIQSE
495	8546	A	1460	255	2154	LAEPEVATDSGQADLPAEGGDPRAEAS CSVLHSPHAMADSRDAASDQMHWK EQRAAQKYLGVDLLGHKKADVLTGGA GNPVGDKLVITVGRGPLLVQDVVFTD EMAHFDRERIPERVVHAKGAGAFGYFE VTHDITKYSKAKVFEHIGKKTPIAVRFT VAGESGSADTVRDPGRFAVKFYTEDGN WDLVGNNTPIFFIRDPILVSLFSDRGIPD GHRHMNGYGSHTFKLVNANGEAVYCK FHYKTDQGIKNLSVEDAARLSQEDPDYG IRDLFNAIATGKYPSWTFYIQVMIFNQA ETFPFNPFDLTKVWPHKDYPLIPVGKLV LNRNPVNYFAEVEQIAFDPSNMPPGIEAS PDKMLQGRLFAYPDTHRRLGPNYLHIP VNCYPYRVARVANYQRDGPMMQDNQGG APNYYPNSFGAPEQQPSALEHSIQYSGEV RRFNTANDDNVTQTSLYLTFRMENIEK VRAFVNVNLNEEQRKRLCENIAGHLKD AQIFIQKKAVKNFTEVHPDYGSHIQALLD KYNAEKPKRSLAFIRVTRSSLEDSPVLD VQMNASGFKIENPTFYSLCENNFAISPG ENEALTIEQMGSTEANCLLRNSVQLVAF VIEITSRKSDIVERHKCAWT
496	8547	B	1461	129	321	XYWMLCSKAEGCCSGAPKAVGVVWST TLIVLHAHRAVTLVVGHSSTGRDSSQVY EDNWVPGWR*

497	8548	A	1462	70	2954	RMLITGSPALGSAIPGTPGRRGEALQLLG QSGTLPFRLLGISGLQASFGPCSEPIGL PILACLAPSSQSEGSPPGAGRGGGADW LSLKSPRTRGNRQICLLRVETHEPRPPAV FCTANRTLWLTAGIPPATRCSTGRSSGPR RIEMRACTTSIQGNVQDKWKSNCVVP DVECACTFLESCLKPGWLGQSKQGAQRS GGDECLQSSHLWEFVRDLLLSPEENCGL EWEDREQGIFRVVKSEALAKMWGQRKK
498	8549	A	1463	3	452	
499	8550	A	1464	2	521	PDSSGPHRLRENPPWCLSPADKTNVKA AWGKVGAAHVRSMCAEALERMFLSFFT TKTYFPHFDLSHGFAQV*GPRARKVAD ALD/TNAVANVGRTLPLNALVRPLSDLHA HKLSGGTRFNFKAPKGHLPLGEPWAA HLPRPSFNPWRLQRLPWGQSFLGFLKH RCLNLPNYR
500	8551	A	1465	154	678	PPLHLRDCFSPPGRALSPVGLYPYRVS PTWLKLTSSDDVKEIQYKLAACKGLTPS QIGVILRDSHGVAQVRLGTGHDTFKA LKSKGLDPDLPEDLYHLIKKAVAVRKH LERNRKDKDAKFRLLIESRIHPFWLRY YKTKRVLPPNWEI*NHLTASALGRINL VWCTPSK
501	8552	A	1466	23	636	FSYLPFGPSHGTWGLWELQFKMRFGVC RHLMEDSMDMDVSPLR/PQNYLFSCCLK ADKDDHFKVDNDENEHQLSLRTPVSL GVFEITPPVLLWLKCGSGPVHISGQHLV AVEEDAEESEEEEEEDVKLLRISGKTKTF MATNGKEYKHYKISSEKSLDNKYKTRTP GFQAFGFEDLHPWPLGSQAFYLSLRVTP PVFLVLRLLDFD
502	8553	A	1467	3	618	AKD/ELHIVEQGHDIRGRSIIK/LATLKM S/VQPTFS/LGGFEIQPTVV*GLKCVSGPC HISGQHLVA/VEEDAEESEEEENVKLLS ISERRSAPGVVSMVPQKKVKLAADDD DDDDEEDDDDDDDDDFDDEEAEEKAP VKKSIRDTPAKNAQKSNQNGKDSKPSST PRSKGQESFKKQEKTPKTPKGPSSVEDIK AKMQASIEKAH
503	8554	A	1468	1	1689	
504	8555	A	1469	3	535	DSVLRGCSLEQRSFISVRLLSYLSACRHP MEDSMDMDMSPLRPQNYLFGCELKAD KDYHFKVDNDENEHQLSLRTVSLGAGA KDELHIVEAEAMNYEGSPIKVTLATLKM SVQPTVSLGGFEITPPVLRKCGSGPVH ISGQHLVVYRRKHQELQAMQMDCRAL STS*ASSAPRPS
505	8556	A	147	90	512	VQGLGVERVPLGSHRGWMGPPRLLSP QERASCLLLLLPLVHVSATTPPEPRIELD DEDFRCVLQLSPEPQPDWPEALHRASAV QA*ISAGGSHLQSSFLIGRLRLKTVTVLL WPLFVLICVYLSVYLPFRLCLDTLSCVV
506	8557	A	1470	1	1025	SVLRGCSLEQRSFIYGRLLSYLSACRHPM EDSMDMDMSPLRPQNYLFGCELKADKD YHFKVDNDENEHQLSLRTVSLGAGAKD ELHIVEAEAMNYEGKSN*T*HLATLKMS VQPTVSL/GGAFEITPPVLRKCGSGPV HIKWTSTYVAVEGKMOKSRRLKKEGRI VKLLKVYLGKRSAPWKVGSKVSTEEK VKTLA*WKDDDRMNDEEDDDDEDDED DDDFDDEEAEEKAPVKKSIRDTPAQKC SESQNGKRLQKPSFTPKNQKGQESFQ ETRKLLKTPKGPSSVEDIKAKMQASIE KGGSLPKVEAKFINYVKNCSRMTDQEA IQDLWQWRKSL

507	8558	A	1471	3	490	SSGPTRLRENPPMVAVSCPTKTNVKAIA WGKVGAAHVRSMCAEALERMFLSFPT TKTYFPHFDLEPRFLPRFKGHGKKVADA LTNAVAHVDDMPKRAVPLSDLHAHKF RVGPGSTFKLLKPLALLG*TLGRPTSPSE FOPLAVARLPWQGSFLGFLKQPC
508	8559	A	1472	35	1288	
509	8560	A	1473	1	1641	
510	8561	A	1474	212	369	HPVTVYLLGYLLFQLPCGSEFSTSETHG HSADRLGAAFAVSRLEQDEYAPG
511	8562	A	1475	63	255	VLMFSSSHG*GYQSSRLQCKLQIVQLIQ DILLFFSF*IFE*LLS*LTPLKIFPLHQNGPS DFVS
512	8563	A	1476	169	391	
513	8564	A	1477	85	1534	KSSHCIKMGPQIFHKTSELVLPATSCPSC PDQNEEDVSQTQYKECCGAGGWCSHSIF AVWHFI*RPDAT*FGLEQRLTGLLASGP VSLREV*LYSSLGTVISGK*KTSNVG*R GLALGSWAFSDKYSWFTMTWACISGP TKALTTGV\GLIAFGQCDVIVAGGVEL MSDVPIRHSRKMIMLMDLNKAKSMGQ RLSLISKFRFNLAPELPAVSEFSTSETMG HSADRLAAAFVSVFLADQDEYALRSHSL SKKAQDEGLSDVVPFKVPGKDTVTKD NGIRPSSLEQMAKLPFAFIKPYGTVTAA NSSF/LLTDGASAMLIMAEKALAMGYK PKAYL/RRDFMYVSQDPKDQLLGPTYA TPKVLEKAGLATMNDIDAFEFHEAFSGQI LANFKPMDSDWFAENYMG*KKPRFGL PPLWRRFNNWVGSLSLGHPFGTITGCR LVMTAANRLRKKGGQYGLIVAACAPG GQGSATDYVEAYPK
514	8565	A	1478	2	359	
515	8566	A	1479	1	585	PRGVIGHGPLGTSFIGKYGCGDYWVKAF LDRPSQPMQGPKNFEVVDLVDVNTPI DLMAFVSAKKERKVSCMFPDGRVSVS ARIDRKGFCGDEISIHADFENTCSRIVVP KAAIVARHTYLANGQTKVLTQKLSSVR GNHISGTCASWRGKSLRVQKIRPSILGC NILRVEYSLLIYVSVPGSKQVFIKAL
516	8567	A	148	98	440	KDDTNTKCW*AWNCSSTRAHWKRTLT LLGRLTMTNIPHDSAIPLGAHPT*MWA YVHQNPQTVMLTETLFMIATNWTLHKC PQ**KE*CNGAVTEWSAALKQNKQLQH VTPRV
517	8568	A	1480	218	1677	SEIFCKGVSSIWSFFFLPPSFLTKTNSVP SWVMFKKIKSFEVVFNDPGKGVTAAG EKVAIGRVNSGRCEVTRVKAVRIPAC RSGLKCLWMPGIPSRCKQTSIEYPRYEDT VFLAEDQPTGENEMVIMRPGNQYEEKFG FELPQGPLEHSFKGKYGCVDY\WVKAF LDRPSQPTQETKKNFEVVDLVDVNTPI LMAFVS/ALKKEKKVSCMFPDGRVSVS ARIDRKGFCGDEISIHADFENTCSRIVVP KAAIVARHTYLANGQTKVLTQKLSSVR GNHISGTCASWRGKSLRVQKIRPSILGC NILRVEYSLLIYVSVPGSKKVILDPL/V* LGSRLSSRTS\SMGSRSTS/SLRMSWVD LNIPDTPEVPSICLGCSFPEGSTVWESPT TPLLDDMDGSQNSPIMYAFEFKMPVP RTYTEVDPICIFNHQCAVSMWKKRSSFT LLVSFWPSLPWTVHFFQRLNSLCNGSVG PTLSPLTS
518	8569	B	1481	21	410	MPSKVRCXSVQVFDAMKTATAVAHCK RGNGLIKLLPVLLGKERFAGVDTRVR VKGGGHVAQIYAIRQSISKALVAYYQKY VDEASKKEIKDILIQYDRTLVADPRRCE SKKFGGPGARARYQKSYR*

519	8570	A	1482	1	456	MPS/KGPLQSVQVFGRRKKTATAVAH/CK RGNGLIKVNRPLEM/IEPRTLQYKVLGS GTGVSGWRTLGD RDVVALESWGAGISN GMFRSCVGCRCQWAAGASSASRQERFAG VDIRVRVKGGGPWPRFMSKKFGGPGAR ARYQKSTDKPIVTQNSLV
520	8571	A	1483	172	661	LLEPVLLLGKERFAGVDIRVRVKGGGHV AQIYGESQELGAWRRWLWEGGLHSAPV PFNCVSFSQSVSPISKALVAYYQKIWSE HGSFP*GRWVCGDQVKDSV*LSKSSLL FLPDVDEASKKEIKDILQYDRTLLVADP RRCESKKFGGPGARARYQKSYR
521	8572	A	1484	1	556	GAARVRLSSPRSDAMPSK/GVPLQSVQIV FGRRKDSGQLLAHCKRAINGLIQ*TG GPLEMIEARARLQYKLLLEPVLLLGKIER FAGVDIPCPV*KGGWSTWPQYAIRQSI SQKPLVAYYPEM*VSMGPSHE/YVDEAF QRREIKDILHPSY\DRNPAGLAGPFVRCE SKKFGGPGARARYQKSYR
522	8573	C	1485	127	435	MAASXNPEVLDITEETLHSRFLGVRNV ASVCLQIGYPTXASVPHSIINGYKRVLAL SVETDYTFPLAEKVKAFLADPSAFVAAA XLGCCHHSCSXCCSPS*
523	8574	A	1486	1	689	KCFI/VGADNVASKQMQQIRMSFRGKAV C*WGKNTMMRKPIRGHLENNPALEKLL PHIRGNVGFVFTKEDLTEIRDMLLANKV PAAARAGAIAPCEVTVPAQNTGLGPEKT SFFQALGITTKISRGTIEILGVRNVASVCL QIGYPTVASVPHSIINGYKRVLALSVETD YTFPLAEKVKAFLADPSAF/VAAAP/VAA ATTAAPRAAAAPAKVEAKEESESEDED MGFGLFD
524	8575	A	1487	66	1104	RTAVMPREDRATWKSNYFLKIIQLDDY PKCFIVGADNVGSKQMQQIRIVPWGEAC VLMGQKTMNGPGPSEGHLENNPASEEL LPH*RGHLGFCFTREDLTEIRDMLLAQ *GCQAAARCWCQLPPCEVTVPAQNTGL GPEKTSFFPGL*VSPTKNLPGGTH*KS*S YVQLIKTGDKMGSQTKAKAAEKMKN LPPSPFGAGQPKQGVVRKNGKHPTNPESA *ISTRGKLCHSRFLGGCPANVAKCLCKI GYPTVASSTPIINNGYKRVPGCLWTP DYTFPLAEKVKAFLADPSCLCVLLPPV GAATTACFALLQPPAKVEAKEESESESD EDMGFGLFD
525	8576	B	1488	98	264	XQVVCKKYRGFTIPEAFRGVHRYLSNAY AREEFACPDDEEIELAYEQVAKALK*
526	8577	A	1489	155	1217	DPPSPVPAPPSSPRDGHFLVPDATMAEEQ PQV\ELFVKAGSDGAKIGNCPFSQRLFM VLWLKGVTFNVTVDTKRRTEVQKLC PGGQLPFLLYGTEVHP\DTTKIEEFLEAVL CPPRYPKLALNPEVQHSWGWDIFAK FFLPNIQEFQTPALN*QSGRRGFLESP*KV LDNYLTSPSPPEEVDETSC*KIEGVSR KF\LDGQRRPHPWLDLQCCPKVTH*VQ V\CKRK*PGNSPHPPKAFPGKCHRPV*S KMPYAPGKNSPSHVPDDEEIELRPMK VAKALQISPSLGLPSTPSIFSTKAPGGFHI ATPMGHTPKLASGQILGDIEPAKGVVE EGMRERNGGPGSDF
527	8578	A	149	535	917	LVSPGKPPEQQGQLP*PRCQII*LVSPGKP PE/PTGTAPRSQPRLSVCPSTQDICRICHC EGDEESPLITPCRCTGTLRFVHQSLHQ WIKSSDTRCCELCKYDFIMETKLKPLRK WEKLQMTPRERRKIFCSVTFRNRGSPV WFLCMY
528	8579	A	1490	2	746	

529	8580	A	1491	217	1007	LNHNRLAVIMANLGCWMLVLFVATWS DLGLCKKRPKPGGWNTGGSRYPGQSP GGNRYPPQGGGGWGQPHGGGWGQPHG GGWGQPHGGGGWGQPHGGGWGQGGGT HSQWNKPSKPKTNMKHMAGAATAGAV *GGLCSYSLGSAMSRPIHFGSDYEDRY YRENMHRYPNQVYYRPMDEYSNQNNF VHDCVNITIKQHTVTTTTKGENFTETDV KMMERVVEQMCITQYERESQAYYQRGS SMGLFSSPPVILLISFLIFLIVG
530	8581	A	1492	32	487	SRRHGSSLWGKVNVEDAGGETLGRLLV VYPWTQRFDSFGNLSSASAIMGNPKVK AHGKKVLTSLGDAIKHLDDLKGTFAQLS ELHCDKLHVDPENFKLLGNVLVTVLAJH FGKEFTPEVQASW/QEDGDWSGQCPVLQ IPLSSLPMMQSFQG
531	8582	A	1493	41	597	APSPRRPWVISQRRTKATITSLWGK\VN VEDAGGETLGRLLVYPWTQRFDS FGNLSSASAIHQPPKVQGTWSKKVLT LGEMP*KHLADDLKGHLLPKPEVNLHC KPAMWDPENFKAPGEMLLVTRFWAIPF SAKEFHPWRLAGLPGQKDG*LGVGQCP CSFQIPLKPLGP*IQSFQG
532	8583	A	1494	1	478	DTRFLERLRLSISSLVPDAMGHFTEEDK ATITSLWGK\VNVEDAGGETLGRLLV VYPMDPRGFFDSFGNLSSASAIHQTPK VKATRAKKVLTSLGKMPIKHLGLIFKGT FCPSLS*TCCT*QACMWD*GTFKLPG MLLVTRFWAIPFSAKEFHP
533	8584	A	1495	3	370	SVCVRAHESVVKSEDFSLPAYMDRRDH PLPEVAHVHLSASQKALKEKEKASWSS LSMDEKVELYRIKFESFAEMNRGSNE WKTVVGGAMFFIGFTALVIMWQKHYGL ASKWDYEKNEWKK
534	8585	A	1496	24	305	
535	8586	A	1497	197	745	LASEQFSTSVVCTSSMKVFVKSEDFSLPT YMESAVTHPLAGRWPVVKAPCSAQPRR PLKEKEKALLGAAFSMG*GKFELLFALK FKEEALLED*TRGLRTELKGTGLFGPVPL FPSIGFSPRLVIHVQKHYVLTAPFPQSF *TKSWVGPSRTKRMLGQ*R*TPIQGLAS KWDYEKNEWKK
536	8587	C	1498	78	281	MELSNNHQLSMSLVELSMSLVWDANLL GWGKSCELTKPSWSLVRSTSRHSRKKGS SWHLPAKLCSTC*
537	8588	A	1499	302	687	
538	8589	C	15	354	416	MKESPGGELPQTGKKPVFLF*
539	8590	A	150	116	830	EGFPGRSLSGGLCCRLRRRFPIDGYRPW RRRRWSCCPGVRPVRMRSHKSWIESTL TKRECVYIIPSSKDPYRCLPGCQICQLV RCFCGRLVKQHAWFTASPAMKYLDVKL GDHFNQAIEEWSVEKHTEQSPTDAYGVI NFQGGSHSYRAKYVRLSYDNQPLVILQ LTVKEWQMELPKLVISVHGGMQKFELH PRIKQLL*KGLIKAAVTTGALILTGRNT GVGKHGGDAPQRTC

540	8591	A	1500	1	1622	MSKPKCLVILVGIQKSSQMPQFPPAGSE RRRGIRQWEMGVVGGEMGVWVPPGVQ GSPPQAHRRRLGSREQLFAPPLKEKSHIPP WGYRENYPIPEPGPNRFPVTEVWGSPG PTVQWGWGLHEALSPALINQAQKDPE VRLGAMVRVSDTHPPPLTPRQSGPLSA LEELGVSFPTLSYLTPEPQLLGEHQIKGSF PGRSTALLLKEVLLRMHSGVICGSDVH YWEYLS/RFGNFIVKKPMVLGHEASGTV RKSGIIGKSTLPGDRVAIEPGCSPEEN* WNSCQDG/RRYNLSPSIFFCATPPDDGNL CRFYKHNAAFICYKLPDNTFEEGALIEP LSVGIHACRRGGVTLGNKVLVCGSWAN RGWVTLVAKAMGAAQVVVTDLSATR LSKAKEIGADLVLOISKESPOEIARKVEG LLGCKPEVTIECTGAEASIQAGIYATRSG GTLVLVGLGSEMTTVPLLHAAIREVDIK GVFRYCNTWVPAISMLASKSV/DMSKPL VTHRVSSWRKVLEAFETFKGLGLKIML KCDPSDQNL
541	8592	A	1501	1	804	
542	8593	A	1502	178	1093	TFLLPACLLAALLPLRHHVRGRAWVQG SILNEG VG*ALKDLINEACWGY*APAG VNLQSMGHRPTVSLVQLTLRV*GASTP YRCDRNLGHGR*NLTSMSKILKMAAG NED/ISLTLRAEDNAGYLGR*YFEGTKPG RKFS DYEMKLM DLDVEQLGIPEQEYSC VVKMPSGEYARICRESQPILGDAVVISC AKD GSENF SASGELGNETVKLSQTSNVD KEEEAVPIKMNEPVQPNFCH*GYLNFFT KVATPLSSTVDTPVCSADGTPLVGRSIIA GYGDHLKYLLGLPKDPRIEESGLGHS
543	8594	A	1503	32	487	SRRHGSSLWGKVNVEDAGGETLGRLLV VYPWTQRFFDSFNLSSASAIMGNPKVK AHGKKVLTSLGDAIKHLDLKGTFQLS ELHCDKLHVDPENFKLLGNVLVTVLAIH FGKEFTPEVQASW/QEDGDWSGQCPVLQ IPLSSLPMMQSFQG
544	8595	A	1504	1	591	NFALEAKNSARAISLVPDAHGVISQRRRT KATITSLWGKVNVEDAGGETLGRLLV VYPWTQRFFDQLLANLSSASAHHGQPPK VQGHMAKKVLTFLGEMPIKHLDDLKGH LLPKPEVNCTVDKPAMWDPENFKAPGE MLLVT/LFWAIPFSGKEFTP*RLQASWAE RWVTWS\GQCPCSFQIPLKPLGP*IQ\SFQ G
545	8596	A	1505	49	273	
546	8597	A	1506	81	720	LFKAPEPHVEEDD\DELD SKLNYKPPPQ KSLKELQEMDKDDESLIKYKKTLLGDG PVVTDPKAPNVVVTRLTLVCEAPGPI TMDLTWKIWKALKKGNHLVLKGRFVNI RSSKFHFPKLN RG*LLFRA*NYVQHTYR TG\VKVDKATFMVGSYGPRPEEYEF/LS LPVEEASQRAWLARRHVTTKSPFFTD DD KQDHL SW\EWNL\SIKKEWTE
547	8598	A	1507	5	290	FNLTHIESRPSRLKK/DEYE/FFTHLDKRS LPALTNIIKILRHDIGATVHELSDK KKD TVPWFPRTIQELDRFANQILSYGAELDAD HPVSPWPVG
548	8599	A	1508	68	312	
549	8600	A	1509	317	916	TSSPPSSLCFLSFS DICHELLGHVPLFSDR SFAQFSQEIGLASLGAPDEYIEKLATIW FTVEFGLCKQGDSIKAYGAGLLSSFGE QYCLSEKPKLLPLELEKTGIQNYTVTEFQ PLYVVAESINDAKEKVGNSAATIPRPFVS RYDPYTQRIEGLDNTQQAHDLG*FHLTV EIGILCSALQKNKVKAMDRMVVCQAVE
550	8601	A	151	770	950	CHSEHRNYKNNHHSIIKVRPRWRIHFHS NVIS*SLVHISKVFVAYKCNQYFHIRKFR

						SVT
551	8602	A	1510	389	1881	NLQPHVLFANLPVPEALKSQRPHSRGAS MSTAVLENPGLGRKLSDFGQETSYNED NCNQKWVPISLDPPHLKERKLGALGPKY CALFEENDVNLTTHIESRPSRLKXDEYG FFPPFGIKRSLPALTNIILKLRHDIGATVH ELSRDKKKDTPVWFPRTIQELDRFANQI LSYGSGNWDADHPGFKDPVYRARRKQ FADIAYNRYRHGQPIPRVEYMEEKKTWG TVFKTLKSLYKTHACYEYNHIFPALLEKY CASHEDNIPQLEDVSQFLQTCTGFRLRP VAGLLSSRDFLGDLAFRVFHTCTQYIRHG SKPMYTPEDICHELLGHVPLFSDRSFAQ FSQEIGLASLGAPDESIEKLAPIYWFTVEF GLCKQGDSIKAYGAGLLSSFGFQYCLS EKP KLLPL/ESLEKTAIQNYTVTEFQPLY YLAESFNDAQGEI*GTFAATIPRPFVSIR HDPHTPQRIGGSWDNTQQLKILADSI*Q *IGIPFAVALQNIK
552	8603	A	1511	1	191	MQK*ITAWAPAPMKIKIIASPERKYSVWI GGSIWPQLST/FQQMWISKQEYDESGPSI VHRKCF
553	8604	A	1512	1	360	SGACPAFLVDRNLRHHETTFNLIMKCDV DIRKDLYANTVLSGGTTMYPGIADRMQ KEITAL/APPSTLRFRIAPP/ERRKYSVWI GGASILASLSTFQQMCLGKQEYDESGPSI VQRKCF
554	8605	A	1513	13	1277	INPPPLSRRCQLSHSVLPPLRRRVSLPVA MEEIEAALVIDNGSGMCKAGFAGDDAP RAVFPSIVGRPRHQGV MVGHGPRTD SY VGDEA/QRSKR GILTLKYPIEHGIVTNWD DMEKIWHHTFYNELRV APEKHPVLALT EAPLNPKANREKMTQ/ILCFETFNTPGHV PWPIQAVLSL*SLWAQPIGIVMDSGDGV THTVPILRGATTLLHANRLGPGGLARDL TDYLMKILTNERGYSFTTHGPSGKTFRNI KGEACATSPLDFEQEMGTAASSSSLEK SYELPDGQVITIGNERFRCPEALFQPSFLG MESCGIHETTFNSIMKCDVDIRKDLYAN TALS GGTTMDPGVIADKIAEGRSTALAAP AP*KIRIAPPAPERKYSVWIGGSILASLST FPA RFWISKQEYDESGPSIVHRKCF
555	8606	B	1514	93	366	XTSVVRPFAKLVRPPVQVYGIEGRYATA LYSVLNPHYVKRSIKVKSNDITAKERFSP LTTNINLLAENGRLSNTQGVVSAFSTM MSVHRGE*
556	8607	A	1515	1	785	FRRQRARAPLRVFLFPLGFDLQPPGRRW AAPAVSGLSRKVRFCFSTSVVRHFAKL GPSVQVYGIEGRYATVLYSAASKQNK EQLEKELLRVAQNPEGNPKVAASVLPN YVVKRSIKSEKALNDITSKKRRFSPSTT QPWIKFALPENGSD*SKYPQGSPPALFP THDEVSHPRIGGYPCTVDLWHLLLEGSQ TPPGI*KLSLKS LP*VKGQVLKLEAKTDP SILGGMIVRIGEKYVDMSVKTKIQKLG RAMREIV
557	8608	A	1516	1	2199	

558	8609	A	1517	9	1618	PALCPTLSSGTSARFRGKNQFSGGLPQIT LSPLAQPCGRLAAMYSNVIGTVTSGKRK VYLLSLLDSFGDCVTCHGASPDICTAK PRDIPMNPMACIYRSPEKKATEDEGSVEQK IPEATNNRVRVWELSKANSRFLPLSYS APGQNSKD*H*LTFCSPLSIFQGFLWT KVAGACNDTLQQLMEVFKFDTISEKTF* SRSHFFFAKLN\CR\YRKANKSSKL VSA NRLF GDKSLTFNETYQDISELVYGAKLR PLADFK\ENAEQSR\AA\NK\W\VS\NKTEG RIHRCSPSGRPFNELTVLGGGFNTIYFQ GACWKISKFSPEPTRKELFYKADGESCA SASMDVTREGKFRYSGAWLEGT/QVLV VCPFKGDDIT\MV\LILPKP*EGAWAKVEK VELTPEVLAKSGWD*FWREMLLVHMP RFR\IEDGLQV*REQLQRHGPLSDFSP* KSPKL/LPGIVAEGRDDLYVSDAFHKAF LEVNEEGSEAASTA\VV\IAGRS\LN\PNRV TFQGGQLFPGFLLREVPL\NTIYLHGAEL ANPCV
559	8610	A	1518	2	363	ELDTLCDLYEP*PSPSIIFINTRRK/VDWLT EKM\HARDFTVSAMHGDMQKERDVIM REFRSGSSRVLITTDL\RIGRGGFRGRKG VAINMVTEEDKRTL\DIETFYNTSIEEMP LNVADLI
560	8611	A	1519	201	648	GPCGHGRVFPLPSLAHMDA*GLLRDR VSSVHMLKRLSFLT*ARGIDVQVSLVIN YDLPTNRENYIHR*A*IWNTPLPLHTWPS LGLKLLIFLIPFLVFQ\GRGGRFGRKGVA INMVTEEDKRTL\DIETFYNTSIEEMPLN VADLI
561	8612	A	152	1	253	SKLAAEMTANRLAESLLALSQQEELADF PKDYLLSQSQD\EGDNDGERKHHKLEA ISSLDGKNRRKLAEMSDVILMM*EFVVA
562	8613	A	1520	49	1720	GSTISSASQDSRSRDNGLDGIEPEGVIESN WNEIVDSFDDMNLSSELRLGIYAYGFEK PSAIQQRAILPCIKGETSQSQKTLWTPD LGRVASGW*CPSHISQGSNLLVHPSLA FDCPCLVHALDT*VSFKEVVL*PAYICI YSHVSSPAWCAILDELITGPCF*SGSHCV TVLIGKVVEP*NAWFIGCLTSLT*DLNI PKGMLFTTFNS*FICLGYDVIAQAQSGTG KTATFAISILQQIQKVVMALGDYMGVAS CHACIRGAPTCVAEVQKLQMEAPHIHR GVPPGRVF*YALPEDTSPKY\KMFVLD EA\DEM\LSRGFKGQIYGH\IQAQAAPPR VVLLSATMPFD\VLEVTKKFMRGPPFRIL VQKGELT\LEGIRQ\FY\IN\VEPEEFNLD LCDLYENLDHHPRPVIFHQPPGGKVDWP HPRRMHAADF\TLYSAMHWRFWTQKER RT*L*REFRSWLLARIFDTQLDLLGQRA LMCQQV\SLVIQTYDPFPPTRGKLLIHRV GSRVDRFGRKGVPINMLTE/EKTKRNLE DIETFYNTSIE\EMPLNVA
563	8614	A	1521	3	607	FCPRGQEFGEKNKLLSPRRPWVISQRR KAT\TSLWGK\VKCGKNAGKEETPGKGS LVVL/HPWTPRGSFEQLWQTCPSALCPS MGNPQSQGTMAKKVLTSLGRCP*STLD\ DLKGHLLPKPEVNLHLLTSLHVGS*RTF KLPGEMLLV\T/LFWAIPFSAKEFHPLKVA GFPGQKDG*LGVGQCPCSFQIPLKPLGP* IQSFQG
564	8615	A	1522	23	437	KTPGKGS LVVL/HPWT\QRFFDSFG\NLS\ SASAHHGQPPKSKAHGKKVLTSLGDAI KH\DDLKGTFAQLSELHCDKLHVDPEN FKLLGNVLVTVLA\IHFGKEFTPEVQASW QKMVTCSGQCPVLQIPLSLLPMIQSFQG

565	8616	A	1523	23	249	APSPDAMGHFTEEDKATITSLWGKVNVE DAGGETLGRLLVVYPWTQRFDSFGNLS SASAIMGNPKVKAHGKKVLTSLGDAIKH LDDLKGTFAQLE*TCPLPLPSWATPKSR HMARRC
566	8617	A	1524	46	379	SQTPMGHFTEEDKATITSLWGKGEMW KKCWKEKTPGKGSLLVVL/HPWTPRGSF DSFGKPVPLPSAHPWATPKVKAPWPRRC LTSLGEMPIKHLGLIFKGTFCPSLK*TCT C
567	8618	A	1525	21	457	NPRVRGALTMELSESQKGFQMLADPR SFDSNAFTLLLRAAFQSLDDAQADEAVL DNKNSLEILLGSGRSLPHITDVSWRLEY QIKTNQLHRMYRPAYLVTLVQNTDPS YPEISSSCSMEQLQDLGGKLDASKSLG KSTQL
568	8619	A	1526	1	455	
569	8620	A	1527	3	468	
570	8621	A	1528	50	895	THASDGALTMELSESQKGFQMLADPR SFDSNAFTLLLRAAFQSLDDAQADEAVL DHPDLKHIDPVVVLKHCVHAAAATYILE AGKHRA\DKSTL\STYL\EDCKILTEKRIEL FFAREYQNNKNSLEILLGKY*GRSLPS YNRVFSWALWIIQVKDQSTFHRMYRP AYLGLDKVVQNTGIPPSYPRELVFSCQP WNQLQDLVGETLKDASKKPWKRASTV VTLGKVNRSPPSSRRKTQKPLPFSWNH RLCRAGCPFSVEKNFSLNLNYPFIHFGHF KNV
571	8622	A	1529	1404	1586	ENESRFSDRNQASAGLYLSDSL*QWIV GNGHATDLWQNCSTSSSGNVHHCFS SSP NGSG
572	8623	A	153	1	759	
573	8624	A	1530	187	701	AELAARMLLLLLSIIVLHVAALVLLFVST IVSQWIVGNGHATDLWQNCSTSSSGNV HHCFS SSPNEWLQSCSRGTMDPVDSSFS ILSLFLFFCQLFTLTGGRFYITGIFQILA GLCVMSAAAIYTVRHPEWNLNSGY* RFA*ILAWVAFPLALLSGVIYVILRKRE
574	8625	A	1531	1	485	
575	8626	A	1532	2	459	
576	8627	B	1533	1	2784	MAAMAVGGAGGSRVSSGRDLNCPVEIA DTLGAVAKQGDFLCMPVFHPRFKREFI QEPAKNRPGPQTRSDLLSGRALEIGAD LPSNHVIDRWLGEPIKAAILPTSIFLTNKK GFPVLSKMHQRLIFRLKLEVQFIITGTN HHSEKEFCSYLQYLEYLSQNRPPPNAYE LFAKGYEDYLQSPQLMDNLESQTYEV FEKDPIKYSQYQAIYKCLDRVPEEEK DTNVQVLMVLGAGRGPLVNASLRAAKQ AD
577	8628	A	1534	2	607	
578	8629	A	1535	1	207	
579	8630	A	1536	232	755	LSCCADDGVSIPGEYTSFLAPNIFSPKLYN KVRACRKKARDLKAQFEMPIVVRHNS NQLSAPQPCSTFSPNRPMDNNRYCT LEFPVEVNTVLQCFAGYFETVLYQDITL SIRPETHSPGMFSWFPILFPIKQITVREG QTICVRFWRCSNSKKGSSHQSMKTSQGQ VRN

580	8631	A	1537	35	2271	LCDWLLVSRNPGVDSARRKMAAMAVG GAGGSRVSSGRDLNCVPEIADTLGAVAK QGDFLCMPVFHPRFKREFIQEPAKNRP GPQTRSDLLSGRDWNTLIVGKLSPWD FVPD\SKV\EKIRRNSEGGPCLQELNFGA YLG LPAFLPLNQEDNTNLARVLTNQIH TGHDFYMFWR\RIHLKKPEDLARDDIEN APTTHTTEYSGEEKTWMWWHNFRTLCD YSKRIAVALEIGADLPSNHVIDRWLGEPI KAAILPTSIFLTNKKGFVLSKMHQRLIF RLKLEVQFIITGTNHSEKEFCSYLQYL EYLSQNRPPPNAYELFAKGYEDYLQSP QPLMDNLESQTYEVFEKDPKYSQYQQA IYKCLLDRVP EEKDTNVQVLMVLGAG RGPLVNASLRAAKQADRGIKLYAVEKN PNAVVTLENWQFEWGSQVTVVSSDM REWVAPEKADIIVS\ELGLIC*PIELSP*V PWIGAQHFP*KMIGVKHPPGSYTSFLAPI SSSKLYNEVRACREKDRDPEAQFEMPYV VRLHNFRLSAPQPCFTFSHRNRDPMI DNNRY\CTLGFPVEVNTVLHGFAGYFET VLYQDITLSIRPETHSPGMFSWFPIPLPY* GSPLTVRERAKPFCV\RFWRCRQFPRKV WVWSGGC*QAPVCCLIQKPPKGPQYT HWPLLSPCRAPSVPEALGKPAFRFLPPCS NSKVPVTSYGAVIPPWPIQRREHFQSCFP CPYIQGGPRDYN
581	8632	A	1538	137	303	
582	8633	A	1539	122	385	YPALEHILKAQAIQSRCGDCSCLPPSAPW DHPGPTTPSPGRRAAADPWHLSPIDGRE HLR*VPVLPVTPPSPTLGHWVTDPSPGV GG
583	8634	A	154	1	921	
584	8635	B	1540	277	480	GTGHFYGRTPSDTNCQEYTHRKLCQIK SKADLVLMKNSKSLTRVIRNILAPQDQN HQONPLNSQFLQ*
585	8636	A	1541	32	1386	VLLGPKAERTNSRRNYQRRDYFSAPRSI TSNQSAKSSSRGVYSAYQAPDIHECCH FRSASFFLDKMATPAVPVSAPPATPTVP AAVPASAPASVPAPTPAPAAAPVPAAP ASSSDPAAASATTAAPGQTPASAQAPA QTPAPALPGPALPGPFGRVVR\HPVI LASIVD\SYERRNEGACPS*SGTLFGKLV DKVHSVEVTNCFVPHNESEDEV\AVDM EFAKNMYETGIKKVSPNKLILGWYAT GHDITEHSVL\IHEYYSREAPNPIHLTV TSLPGTGRMSIKAIYVSTLMGIPLGRT/L WGVMTPLTVKY\AAYDTERIRRLTLM K\TCF*PPTRVIWTSQVDLQEGGGIQLR NPGMPLSTSVANMPEGCTCLGKVSADN TIRKVGHFLMSLVN\QVPENRKPMTFET MLNSNINDLFMVTYLANLTQSRIALNE ELVNL
586	8637	A	1542	1	3399	
587	8638	A	1543	1	3126	
588	8639	A	1544	115	348	
589	8640	A	1545	1	513	FHFTPLFRDGETYVV\MLDSTLPRSQYAY ILPQVSFTAVGYHKKHITLIFNPARKLPEQ DIAQGSYIALPLTLLVLLAGYNHDKLIPL LLQLTSRLQGVGALGQAASDNSGPEDA KRQAKKQKTRRTLRLQEEFQLMWCLVP WRGTLGIHLFSSLPFASEILLETTATCIHY
590	8641	A	1546	1	888	
591	8642	A	1547	1	4710	

592	8643	A	1548	37	3683	LGLGLSMLVGQAGPLGPAVVTAAVVL LLSGVGAHGSSEDIVVCGGFFKSDVEI NYSLEIKLYTKHGTLYQTDAPNNGY FMIPLYDKGDFILKIEPPLGWSFEPTTVEL HVDGVSDICTKGGDINFVFTGFSVNGKV LSKGQPLGPAGVQVSLRNTGTAEKIQAT ATQPGGKFAFFKVLPGDYEILATHPTW ALKEASTTVSVTNSNANAASPLIVAGYN VSGSVRSDGEPMKGVKFLFSSSLVTKED\
593	8644	A	1549	1	474	A
594	8645	A	155	1	424	
595	8646	A	1550	1	1554	
596	8647	A	1551	87	736	FIMDNLSSEEIQQRAHQITDESLESTRRL GLAIESQDAGIKTITMLDEQKEQLNRJE EAWAQIHKDMRNETEKTTELNKACGLC VPCNRTKELLSLGQGFIKTTWGRWWE KTSPWQC*YSKQPGP/VWTNGQLQOPTT GAASGGYIKRITNDAREDEMEENLTQVG SILGNLKDMLNIGNEIDAQNPQIKRITD KADTNRRFVLDYCPMPEQK
597	8648	A	1552	99	362	
598	8649	A	1553	184	360	
599	8650	A	1554	3	403	
600	8651	A	1555	1	872	EFGTRWDFSMVAFADLDRAGSDLKAL RGLVETAAHLGYSVVAINHIVDFKEKK QEIEKPVAVSELTTLPIVQGKSRIKILT RLQIMLSDHSPAKVLKNTLKRAGL*DA VGAGFPKAEKAFFILLCTHLDVLDVCIT VTEKLPFYFKRPPINVAIDRGLAFDLALIP LLSKDSTMRRYTISPVPPLQF*CKSCKGKN VIISACKKRPF*KIRGPILTWANLGLPV WGFSESERQFGCPNCRALLHGETR KTAFGHISTVKKPRPSEGEDCLPASKKA KEG
601	8652	A	1556	46	584	SRRPWVISQRRTRLSTSLWCKVNVED AGGETLGRLLVVPWTQRFDSFGNLS SASAIHGQTPKVKAHGKVLTLGEMPL KHLDDLQGAFFAQA*SELALVDKPAM WDP*GTSKLPGEILLVTRFGQSLFRQKNF TPGGARVSWGRKMGDLELASALVPSRL PLSSLAHECRAFQG
602	8653	A	1557	1476	1747	GNFNSLRLSKTQLCAHCLYPHTFGRQR WVDHLRLGVRD*PGQHGETPSLLKNNN NNTKISWAWWHEPVIPAMGEAEAGES LEPGRRLQ
603	8654	A	1558	1	507	
604	8655	B	1559	15	400	MSMLRLQKRLASSVLRCGKKKVWLDPN ETNEIANANSRQQIRKLIKDLIRKPVTV HSRARCCKNTLARRKVRHMGIGKRKGT ANARMPEKVTWMRRMEILRHLLTRYRE CETINRAMHHLLNLKVMs*
605	8656	A	156	3	1371	INIVVIGHVDSGKSTTTGHLIYKCGGIDK RTIEKFEKEAAEMGKGSFYAWVLDKL KAERERGITIDISLWKFETSKYYVTIDAP GHRDFIKNMITGTSQADCAVLIVAAGVG EFEAGVSKNGQTRIEHALLAYTLGVKQLI VGVTKMDSTEPPYSQRYEEIVKEVSTY IKKIGYNPDVAFVPISGWNGDNMLEPS ANMPWFKGWKVTRKDGNASGTTLEA LDCILPPTRPDKPLGLPLQDVYKIGGIGT VPVGRVETGVLKPGMVVTFGPVNVTE VKSVMHHEALGEALPGDNVGFNVKNV SVKDVRRGNVAGDSKNDPPMEAAGFPA QVILNHPGQISAGYAPVLDCHTAHIACK FAELKEIDRRSGKKLEDGPKFLKSGDA AIVDMVPGKPMCVESFSDYPPLGCFVR DMRQTVAVGVIAVDKKAAGAGKVTK

						SAQKAQKAK
606	8657	A	1560	15	710	INPPPPAFLSLLRPQCSMLRLQKRLAS\S VLR\CGKKKVWLDPNETNEIANANSRQQ IRKLIKDG\LIIRKPV*RVHSRARCCKNTL IARRKGTAH/CGIGKREGYSPMPRMP/TR KVTWMKENEGFWRLASERYR*NLKKI RFATLLSQALYPEG*RGNVVSKTRRVFH GNTFHKLEGRQRPKKAPWLDQA*G/RR RS*DQKGHGKR\REERLPGQRKEEINQRL YSKEEETKK
607	8658	A	1562	2	419	MASGRARCTSNLRNWVVEQVESGQFP VCWDDTAKTMFRIPWKHAGWAIFKGG YKEGDTGGPAVWKTRRLCALNKSSEFK EVPGRMDVAEPYKVYQLLPPGIVSGQ PGTQKVPSKRQHSSVFSEKKEEDAIAN CTL
608	8659	A	1563	20	431	
609	8660	A	1564	107	400	
610	8661	A	1565	191	353	PHSSTCPPAPMLVF*KRDPPSLGPHDAL VPPCPVPVEILRSSAKTRCGKKASS
611	8662	A	1566	553	690	SRRRFPMSGTKLV*G*GEMESLEEQA GKGTECALHPVDLFSSPGPLFNSLCLSK PMAPTL
612	8663	A	1567	2406	4031	GGRAGDGPLSATCTYAPSLWLDEGSPCL PGPLVTEADRRGTLGTEYPPQAEVAEGK GPDEGPMACSLRNSSTNKEASYHPGFL VVLLPEFDWYLSKSPNMYQVGTGECRC TGVHSSPEVPGLTPGNWPPWGSHTVQ RMASGRARCTRKLNRNWVVEQVESGQF PGVCWDDTAKTMFRIPWKHAGKQDFRE DQDAAFFKAWAIFKGYKEGDTGGPAV WKTSLCCALNKSFDKEVPGRMDVA EPYKVYQLLPPGILSGHVPQTQKVPSKRQ HSSVSSEARKEEKDAMQNCTLSPSVLQD SLNNEE\EGSGGAVHSDI\GSSSSSSSPE TTRKITDTTEAPFQGDQRSLEFLALPEP D*SLLLTFIYNGRVVGEAQVQSLDCRLV AEPGSESSMEQVLFKPGPLEPTQRLLS QLRRGILVASTPQGLFRCSAFCPPIFWGI APQAPP\PGPHLLPSNECVELFRTAYFC RDLVRYFQGLGPPPKFQVTLNFWEEESH GSSHTPQNLITVKMEQAFARYLLEQTPE QQAAILSLV
613	8664	C	1568	77	325	MSLIQEALHLVLTDPDAPAGDDPKYRE WHHFLVNMKGNDISNGTVLSDYXCAA PPKAPSHVPQFSVACIIDFSSSCPPWHG*
614	8665	A	1569	60	287	
615	8666	A	157	1	92	TSHQSHCSTFLTVSKW**LKTAYCLYHY HS

616	8667	A	1570	3	703	VEFFSSQRAELYATPLTPAPGPNNGGIPGW TLWLALPRPGNLRKGPGLSLQEVDEQP QHPLHVTYAGAAV/DDELGKVLTPQTQVK NRPTISISWDGLD/SK GKLYTLVLTDPDA PKQGGDPKYREWHHFLGWSTLKGQMT SATGTVLSIDYVGLGGLPKGTGLHRYV WLVIYEQDRPLK\CDPHPSATRS\GDHR GKIQRWASLPVKK**SSRAPGGWAPCYP QPEVGMNQCAPKL
617	8668	A	1571	1749	2411	APSCLVSEHSAPGPQREL PQPLTFQAYE QILGITCGSCPAQGWGAWSSDAVPQLL ARRPPLPHGLPACGEWGRGELGVKPSGL PSHAGPAWGHQVRTVCATAHPQDCISPE GAVEEEIVGG*GCITEGQSQRVLQIWPS QGVSSLSALVPLNMFTELLIEYYEKIFST PEAPGEHGLAPWEQGSRAAPLQEA VPR TQATGLTKPILPPSPLMAARRRL
618	8669	A	1575	1	254	
619	8670	A	1576	3	308	
620	8671	A	1577	1	380	IP TPLIGNFGPRGPRIRHERPQKRDDRREP SSFGKRRQ*DGTL LCRRCGSKA\YHLQ KSTCGKCGYP AKRKRKYNWSAKAKRR NTTGTGRMRHLKIVYRRFRAWDFREGT TPKPK*GSLLOHSSSS
621	8672	A	1578	41	544	APSPRRPWGHFTEED\KATITSLWGK\VN VEDAGGE\TPGKGS LVVYPWTQRFFDS FGNLSSAF\AHGQTPKVKAHGK\KVLT\ SLGDAIK\HLDDLKGTFAQA*VNLHL*QS CNVDPAENFQAPGEMLLVTR/VLAIHF\G K\FTPGGCKASWAEDG*LAVGQWPCSS RYH
622	8673	A	1579	1207	1369	
623	8674	A	158	232	552	SLH*PRMATQRKHLVKDFNPYITCYICK GYLIKPTTVTECLHTFCKTCIVQHFEDSN DCPRCGNQVHETNP\LEMLRLDNTLEEIIF KLVPGLREQELERESEFWKENK PQNGQ DDTFKSLTNRK
624	8675	A	1580	1	1716	TCIAAVKMEGPLSVFGDRSTGETIRSQN VMAAASIANIVKSSLG PVGLDKMLVDDI GDVTITNDGATILKLEVEHPAAKVLCE LADLQDKEVGDGTTSVVIAAELLKNAD ELVKQKIHPTSVISGYRLACKEAVRYINE NLIVNTDELGRDCLINA AKTSMSSKIIGIN GDDFANMVVD\AVLAIKYTDIRGQPRYPV NSVNILKAHGRSQMESMLISGYALNCVV GSQGM PKRIVNAK\ACD\DFSLQKTKMKL GVQVVITDPEKLDQIRQRES\ITKERIQKI LATGANVILTTGGIDDMCLKYFVEAGA MAVRRVLKRD\KRIAKASGATILSTLAN VEG*ERFEGAMWDQAEV VQERICDDE LILIKSTKARTSASIISRVPIDSMCEMER SL\HDA\LCVVK\RVLESKSVVPRIGGAV EAALSIY\LENYATSMGSREQLAIA\EFA RSLSGYSPIPLAVNAAQDSTDLVGKN*/ RLFHNEAPGLTPEARKNLKWIGLDLSNG KPRDNKQAGVFEP/TPIVKVKSLKFATE AAITILRIDDLIKLHPRK*R*\KHGSYEDA VHSGALND
625	8676	A	1581	1	513	PRVRNLSREWLCDRHLREKMFSSVAHL ARANPFDTPHLQLVHDGLGDLRSSSPGP TGQPRRPRNLAAA AVEEQYSCDYGSGR FFILCGLGGIISCGTTH\VALVPLDLVKCR MKVADPQKYKGIFNGFSVTLKEDGVRG LAKGWAPTFL\GYSMQGLLQVLA FYEVF KVLY

626	8677	A	1582	2	1296	ALCEPQPFQGGSCVAILGRKMFSSVAHL ARANPNTPHLQLVHDGLDRSSSPGP TGKPRRPSQ/HMAAAPVEEQYSCDYGG RFFILCGLGGIISCGTTHALTALVPLDLVKC RMQVDPQKYKGUFNGFSVTLKEDGVAR GLAKGWAPTFLGYSMQGLCKFGFYEVF KSLAYSNMLGEENTYL*RTSLYLAASAS AEFFADIALAPMEAANKVRIQTQPGYANT *EGISFPKCIKEGLTSILQGGLPLWMR QIPYTMN*SSPCLERTVEALYKFVVPK PRRE*FKRQSRLVVTIW*QVTIARVFCAN CFSPLPEFLG*PVLD*GKKVSQCFLWVLQ RDLGFKIGVWKGLFARIMIGTALTALQ WFIYYSVKGYFRILPRPPPEMQESLKK KLGVNSVVRIKANCGLNLLVDPVFEESA KGTFIYLTV
627	8678	A	1583	127	433	RPLESWIGLVRCNICRSPIAEAVFRKLVT DQISKNNWRVDSAATSGYEIGNPPDYRG QSCMKRHGIPMSHVARQDLNRKSNRV KTCKAKIELLGSYDPQKQL
628	8679	A	1584	2	535	
629	8680	A	1585	551	1299	PADPPRPSYRHRTPPAHWSRLRRSRL RRRGSHTRCVGVGAGLRRRAGARLAV RLRASACGTPRCLGASARGKMAEQATK SVLFVCLGNICRSPIAEAVFRKLVTQNI SKN/WEGRQRGNFRWVIDSGAVSDWNV GRSPDPRAVSCLRNHGIHTAHKARQIT KEVFPTFDYILCMDESNLARDLNRKSNR VKTCKS*KFELPWEL*SPQKQLIED\PIY GE*LWTLETVYQQ\CVRCCRAFLAKAH
630	8681	A	1586	1	1239	
631	8682	A	1587	298	408	
632	8683	C	1588	92	244	MRCEIILVLIPYVYFYSNKLCSRLXXXX XGGAVLKNPWGGQSLPGLAR**
633	8684	A	1589	33	191	RDDPRVRPPNSHT*PQQEPGL*LIKCTSP PQAPAPRTVHGPFYFMRLIKMF
634	8685	A	159	445	673	RECLH*PRMATQRKHLVIDFNAYITCYIC KGYLIKPTTVTECLHT/FCRCMEAFPSLL LA
635	8686	A	1590	3	1285	
636	8687	A	1591	3	3469	QPGHTIYLLPTVVICNLLPCELDYFVKGM PINGTLKPGKEAALHTADTSQNIELGVSL ENFPLCKELLIPPGTQNYMVRMRLYDVN RRQLNLTIRIVCRAEGSLKIFISAPYWLIN KTGLPLIFRQDNAKTDAAAGQFEEHELAR SLSPLLFCYADKEQPNLCTMRIGRGIHPE GMPGWCQGFSLDGGSGVRALKVIQQGN RPGLIYNIGIDVKKGRGRYIDTCMVIFAP RYLLDNKSSHKLAFQAQREFARGQGT
637	8688	C	1592	398	655	MMFPLAFSLPLKNAFHISVCRVCPGYTG FAKRALTALNLDTSANCCNTPPAEXP NVHNPCYMGLSKPARXSKLGSCKGSS XH*
638	8689	A	1593	1	930	
639	8690	A	1594	1	134	

640	8691	A	1595	3	2455	HASVCPAVGVQRLCLFPCVSLQALFMGS PLRFDGRFFLVTGAGAGLGRAYALAF ERGA LVVNDLGGDFKGVGKSLAADK VVEIRRRGGKAVANYDSVEEGDKVVK TALDAFGRIDVVVNNAGILR/DINSFARIS DEDWDIIHRVHLRGSFQVTPAAWEHMK KQKYGRSMTSSASGIYGNFGQANYSA KLGLLGLANSLAIEGRKSNIHWNTIAPNA GSRMTQTVMPEDLVEALKPKYVAPLVL WLCHQSCEENGGLFEVGAGRIGKLRWE RTLGAIVRQKNHPMTPEAVKANWKKIC DFENASKPQSIQESTGSHIEVLSKTDSEGG VSANYTSRATSTATSGFAGAIGQKLPPFS YAYTELEAIMYALGVGASIKDPKDLKFI YEGSSDFSCLPFGVHIGQKSMGGGLA EIPGLSINFAKVLHGEQYLELYKPLPRAG KLKCEAVVADVLDKGSVVIIMDVYSY SEKELICHNQFSLFLVSGGGFGGKRTSDK VKVAVAI PNRPDAVLTDTSLNQAALY RLSGDWNPLHIDPNFASLAGFDKPI LHG LCTFGIFCQGVLLQQFCR*MDVVQGFKG N*RARFAKPVYPGANFYQT*ECWKEIG NRNSFFKPKVQGNLETLVSKWHMWDL GTQHSGYFSLRTPSEGPSFRVPLVFEEM GRRLKDIGPEVVKKVNAVFEWHITKG GNNGAKWTIDLKSGSWEKLYQGPS/KK GAADTTIH/ILSDEDF/LWEVVLGQA*PSR KAFFSGPG*RPQGGTSMA*AQKLSDGFL KDYAKLLKGTPTLLIKMESIKIPPHQIC LDYSAKS
641	8692	A	1596	2	289	
642	8693	A	1597	1	397	
643	8694	A	1598	1	410	STMISPVILFSSFLCHVAIAGRTCPKPDD LPFSTVVPLKTFYEPGEEITYSCKPGYVS RGGMRKFICPLTGLWPINTLKCTPRVCP FAGNLKRMGAVRLITDFLNYSPTRFSSFL LTWGFILEWALDSAKCIEGG
644	8695	A	1599	19	1215	CQCDSSSTMIFSRCSLSSFLCHVAIAGRT CPKPDDLFPSTVVPLKTFYEPGEEITYSC KPGYVSRGGIEESLSCPLATGTVGPFNTSG NVTPRVCPFAGIFRKMGGRTLITTF*NYP NTDPVFSLLTLGF*FWNGALDFWPSCTG GKGKWSPELPGLVAPIICPPPSIP/TGFA TLHVLLRPFR LGNNSPPIGDTAVFECLAH NMAMFGNDTTTCTTHGKLDLNYPECR GSKMPPFPHQDPDNGIW*TYPCQNPNTL FTRVKAPHLGLPHDGIFSGMGPRKE NEC *PQTWGKPGSWPLAPSW*KPSLVKGTPV KKRPTVV/YPQGERVKDSREKFKEWECL HG**KFLSFCKNKEKKCSYTEDAQCIDG TIEVPKCFKVEHSSLAFWKTVDASDVKPC
645	8696	A	16	3	145	SSSSDFAGQTL*STQTVQN*FKKVLPKG RLYPVPIATMGIKEPLIS
646	8697	A	160	22	849	WIERDLNCIKRLK/PTTNMMLNDEIVNIS PKIIKIRQGYLLSMILFGIVQKDLTRKLM QGRETKGIEIRKEVKL*KRKR*ISICRCH E*IW*VPCIKVMQKAFYDIPAKNMENEIL KKQCHFKDPSSA*REKMR LICFEELYPEN KITKEERDRI/RRTISKLLLPKFHLQP*NP RQVSLMLN*QANF*EFICIFOKSKIVKAI L*NGQRGLKFLNIKT CYKAIEIMKVL IWH KDKKLD*WNSIQVSKVDPRVYHHSFE KGDIEV*WGKGCSFQ
647	8698	A	1600	1	282	

648	8699	A	1601	1	453	EFGSQQLGRREEWQRQGSVSRRLSARR GPQAPGTRLPRRHPARAFPAATMPKRKV SSAEGAA*LEPNSRSARLSAKPPAKGEA KPKKAAAKDKSSDKK\VQTKGKRGAKG KQAEVANQETKEDLPAENGETKTEESP ASDEAGEKEAKSD
649	8700	A	1602	146	824	TWKGKDPKPKPRGKMSSYAFFVQTCR\EE HKKKHPDASVNFS/ESFSKKCSERWKT SA*R/EKGKFEDMAKA\DKARYEREMK TYIPPQRGRQKRKFQDSQLHPRGPPSGLL SSSCSEYRPKIK\GEHP\GL\SIGDVAKKLG RDVGINTAAD\DKQPYEKK\AAKLKEY EKDIAAYRAKGKPDAAKKG\VVKAES KKKKEEEEDEEEG\DEEDEEEEEDEEDEE DEEEDER
650	8701	A	1603	1	223	
651	8702	A	1604	1	400	FADD/PSDK/FFTSNNGMQFSTGHNDND KFEGNCAEQDGSWWMNKCHAGHLNG VYYQGGTYSKASTPNGYDNGHIWATWK TRWYSMKKTTMKIIPFNRLTIGEGQQHH LGGAKQVRPEHPAETEDSLYPEDDL
652	8703	A	1605	18	365	NILIKVYFNSKNDFKIFHELFFKQNYMKN MYKSVINVIDIFMNKFQ/SEKYP\IDKGS LNK*MLTILALKSNTT\VR\IRD\TAFYYVR EHIINVSSKRARYWVCVGF*ASC*QPPL F
653	8704	A	1606	212	1645	HYKARSSGHS\DIMSWSLHARNLILYFY ALLFLSSTCVAYVATRDNCCILYERFGC YCAPTCGIADFLSTYQTRVD*DLQSL\ED ILHQVENKTS\EVKQLIKAIQL\TYPDES SKPNMIDAATLKSRLMEEIMKYEASIL THDSSIRYLQEII*FQIIQKIVNL\KEKVAQ LEAQCQEPCKDTVQIH\DTGKDCQDIAN KGAKQSGLYFIKPLKANQQFLVYCEIDG SGNGWTVFQKRLDGSVDFKKNWIPYK EGFGHLSPTGTTEFLAGEMRKIHFD*GTQ SAIPYGI*GVGTGKTWEWARNQYCRSM PLFKVVHEVDKYRFTYAYFAGGDAEDA FDGYDFGDDPSDKFFHIPIMAMQFTYLG TMDNDKV*KANCA*/QQGWDPGWWDG NKC\HAGVHSSMGV\FTQG\WALYFQKAS YLPNGLWIMGII\WATWK\TRWVFR*RPK TMKIIPFNRLTIGEGQQH\HLGGSQTGLE TF
654	8705	A	1607	2	529	GTVAACGACYWLLGLMAVRASFENNCE IGCFAKLTNTYCLVAIGGSENFYSVFEGE LSDTIPVVHASIAGCRIIGRMCVGTEEIL ADV\KVEVFRQTVADQVLVGSYCVFSN QGGLVHPKTSIEDQDELSSLLQVPLVAG TVNRGSEVIAAGMVVNDWCAFCGLDTT STELSVVE
655	8706	A	1608	18	889	GVQGTVAACGACYWLLGLMAVRASFE NNCEIGCFAKLTNTYCLVAIGGSENFYS VFEGELSDTIPVVHASIAGCRNIGRMCV GNR\HGLLVPNNTTDQEL\QHISATGLP RHSGRFRAGWKERFLSLWGNFFNHLAID YVGLGSNQD\LDKGRQEEISGQMLFKGW EVFRQTVADQVLVESYCVFSNPGRAW VPSPRPFQ*RPNELSSISFKVPLVAGTC* TKGSEVICLLGMGGEMNWCAFCGPGTP NPAQSCQVVEECLQS*NEAPALAPIANR ACGNLSLIDSLT
656	8707	A	1609	1	248	GPLIWEWPASPEPPPLPWGKPRMQ/SG*Y G*TP*IPKIRFPKKPFPFPQALEPQQKGP N*AHP*EPTPAKKYSPQRVQKVPK

657	8708	A	161	796	1381	SLTSDKRQWALGSMDFKFKHWICH/PIK MLHLGVGPKGLSVTQQFSSQN*FPVCAF QSSQYIPLPAQKLMYSQ*PVQNRCSNQ TIPVAHPMSGHQVSHHR/PANNPGKEEV PGQEGKN*NKDVNNF*TGQPWTKGNLEI STWPERNLILALKVPIKAELKRSWASSN CKQT*LRHPQCDDVFISMKEQSMKCRN F
658	8709	A	1610	290	1414	NKRHPSRVYMSLPQGAEKVQAMYIWDG TGEGLRCKTRTLDSEPKCVEELPEWNFD GSSTLQSEGFQTVNMYLVPAAMFRDPFR KIDPNKLVLCÆVFRYNRRPAETNLRHT CKRIMDMVSNQHPWFGMEQ/EYTLMG TDGHPFGWPSKGFPQGGQYLLGVG/G DRSLGRDIRÆAHYRACFYAGTRIPGTK AGVSPLQ\WEFQIGPCCEGIKQGG/HIFWV ARFILHRVCEDLGVIATFDP*/RPLLGN WNGA\GCHTNFSTKAMRKENGLKYIEK AI*KLTNR\HKSHIRAYDPKRGLDNARRL TGFHETSINDFSVGVANRSASIRIPRTV GQEKKG YFEDRRPSANCDPFSVTEALI RTCLLNETGDEPFQYKN
659	8710	A	1612	129	1182	
660	8711	A	1613	1	353	FGTRSFDSRSEAEAAKNALNGIRFDPEIP QTLRLEFAKANTKMAKNKLVGTNPSTP LPNTVPQFIAREPYELTVPALYPSSPEVW APYPLYPALAPALPPAFTYPASLHAQ ETL
661	8712	A	1614	129	1238	APSPSSGCSQPQLSALTPGTRVLAPSF ASFLPSFFLPLAPALPLQVALPGPDCLG SPLPARALPRLSLALPESAAA VADSPRE PQPNPSPTATAPAPAPAPQPAAPARGSPG ARGRLQWASAPSPAPQPCPARRGRTG KMNNGGKAEKENTPSEANLQEEVRTL FVSGPLDIKPRELYLLFRPFKG YEGSLIK LTSKQPVGFVSFDSRSEAEAAKNALNGI RFDPEIPQTLRLEFAKANTKMAKNKLVG TPNPSTPLPNTVPQFIAREPYELTVPALY PS\SPPEVWAPYPLPRRELGACFYLPFG/S FTYPASLAWPRCAGSLPRLLLRAGSPVS SAEYYTLQQWLLEGRTIALLWKYG
662	8713	A	1615	129	1143	APSPSSGCSQPQLSALTPGTRVLAPSF ASFLPSFFLPLAPALPLQVALPGPDCLG SPLPARALPRLSLALPESAAA VADSPRE PQPNPSPTATAPAPAPAPQPAAPARGSPG ARGRLQWASAPSPAPQPCPARRGRTG KMNNGGKAEKENTPSEANLQEEVRTL FVSGPLDIKPRELYLLFRPFKG YEGSL* KLT\SKQL*GFVSFDSRSEAEAAKNALNGI RFDPEIPQTLRLEFAKANTKMAKNKLIV GTPNP\STPLPNTVPQFIAREPYELTVPAL YPS\SPPEVWAPYPLYPALGPALPPAF TYPASLRCPGNPVEKEIQDSV
663	8714	A	1616	1	669	
664	8715	A	1617	267	1057	GRTMMFGAKRRQEEWEKVRKPEDPEEC PEEVYDPRSLYERLQEQKDRKQQLRGT VS\NCKNMVRGLDEDETTFLDEVSRQQ ELIEKQPKRÆELERT*RNTEITSRLEFSQ ENKKEVEKLTCE/VL*KPRTKFSQANVL QOEL*SMKSSES GHQCEKT*NRTPEPD*Q ESRALILAKSLGNNLPLSGPFHPLAPSAA SMYRHPPRPGWPTLGAATPSPASDSEGTI QCHRKDCSPPCFRTNTFLRGPLSFFRSLH REAPPQG

665	8716	A	1618	1	641	DTRFLERLRLSISSYVQTPMGHTEEDKA TITSLWCKVNVEDAGGETLGRLLVVYP WTQRFDSFGNLSASAIMGNPKVKAH GKKVLTSGRLP*KHLADDLKGTFAQA* SELHCDKAALLDPEWFKLPGEILLVTR FGQHFHRAKNFTPEGCAISWQERWVT WSWPVPCSSRLPLKLNCP*MQSFSRIRLL FLQAITNNKSISAKRSP
666	8717	A	1619	1	194	
667	8718	A	162	3	1116	LNQWQEQTGNPERTHRPSEGSGLLLQDP GDFSNTLSAPTA EVEKGDPLPKIPPLEEL KETHLTHKDSHKLKIKGWKKAFLANGH QKQTGEAILIPDKTKFKATAVKRDKEGD YIMVKGLVPQENITILNTYASNTEAPKFI KQLLIDLRNEIDSNIVVGNFNTPTAIDR SSKPKVNKETMDLNYTLEQMDLTDIYRT FHPTTAEYTFYSTVHETISKIDHMIGHKM SINTFKKIEIMSSLTDSHGKILKINSERNL QNHANTWKLNNLLNEHWVKNEIKMEI IQLFELNNNDTTYQNLWD TAKVVLRG KFIALNAYIKKTERAKKTIYSHTSGI*KQE QTKPKPSRRKEIKIRAELEIETKKTI
668	8719	A	1620	98	1136	ASDAFHSLSAPGLRLGSRSAARPATMTE QAISFAKDFLAGGIAAAISKTA VAPIERV KLLQVQHASKQIAADKQYKGVDCIV RIPKGAGGVLSFLEGQPLPTVIRYFPATQA FNFRPFKD/KSYKQIFPGAWDKHTQFW R*FGGANWASGVAAGADHPSCFVYPLD FARTGLGKGRWKSQAQSASFRGLGDCL VKIHQVQTASRGYQGLPVSPFTATIYP AAAYYGVYDTAKGHASPTPSNTHILLS RMNRARTVTARGAVGCPNPLKTVRRR MIDAIRGAKGADIMYTG/TLVDC*RKNLS EDEGGQRPFKGCVVQTLRGHGGRPVS LVPVRTSSRRVI
669	8720	A	1621	4	101	VQWNDFGSLQNPFGVSPFFWLSLPNNL GFKGSSSRPGPFLKF**KP/EVFRVNP DGF PPFAP*FGPPGPPKSWGFPP*PPGVSPFF WLSLPNNLGFKG
670	8721	A	1622	3	1728	GDRTDGVWWWLGLSRRYAIPFNSLEPSS LGSCPLSIGTHKALHALELTITDIQCGK AFNSSSSFRYHERHTTGEKPYECKQCGK AFRSASLLQTHGRHTTGEKPYACEKCGK PFSNFSFFQIHERMHREEKPYECKGYGK TFSLSPLFHRHERHTTGGKTYECKQCGR SFNCSSFRYHGRHTTGEKPYECKQCGK AFRSASQLQIHGRHTTGEKPYECKQCGK AFGSASHLQMHGRHTTGEKPYECKQCG KSFGWASRLQMHGRHTTGEKPYCKQC GKAFGWPSNLRRHGRHTTGEKPYCKNQ CGKKWKDQNEIEYQNPRRNFRSLIEGN VNEIKEDSHCGETFTQVPDDRNLNFQEKK ASPEAKSCDNFVCGEVGIGNSSFNMINR GDIGHKAYEYQDYAPKPYKCQPKAF RYHPSFRTQERNHTGEKPYACEKCGKTF ISHSGIRRRMVMHSGDGPYKSSFLRSH KVPGHGRRFAMNPTLLNKEDERGKNKV VTREHLDRMKNSCIVCNMGHSNTEIDV NVVMGNYERLERDARMIRKKRKYSD IRFRIMGRYTVRVEVLTA VNSE
671	8722	A	1623	1637	5763	KPGNGACAGREWCDDGGGAAWNWRDP GLPVGDSGVWDRVLELLGPRSPRPLDV GGPAAGTPGVLSRCPSTAALAPKPFCA APRPQPDAPACAGATGGSCADFD SGVDF VRRRSSGLWGPQPPLSPVKNYTEMFQDP VAFKDVAVNFTQEEWALLDISQKNLYR EVMLDTFWNLTSIGKKWKDQNEIEYQ NPRRNFRSVTEEVNEIKEDSHCGETFT VPDDRNLNFQKKKASUK*NHVTALCVQK

						LA*VTHL
672	8723	A	1624	2	656	APTPTGQRVVRATPAQSAPVRLRRRSYD VNNPIPSNLKSEAKKAAKILREFTEITSR NGPDKNIPGSTVIAKAK\GLANSCLLNQS PGSLVTFQGGPGVLVARLPDGGK\WSSP FS\ALGIAGFG\GGFEIGI*GIQTLVILEF/D DPCC*EAFKGGNLTGGNLTAVGPLG RNLEGNVALRSSAAVFTYCKSRGLFAGV SLEGSCLIERKETNRKFCY
673	8724	A	1625	141	1307	FHVNNPIPSNLKSEAKKAAKILREFTEITS RNGPDKIIPAHVIAKAKGLAILSVIKAGFL VTARGGSGIVVARLPDGGKWSAPSAIGIA GLGGGFEIGI/EDTFTATYSL*ALPWLPIS VECHSSFLRLPSA*HIFLHPFTVNLMSD LVIIILNYDRAVEAFKGGNLTGGNLT AVGPLGRNLEGNVALRSSAAVFTYCKSR GLFAGVSLEGSCLIERKETNRKFCYQDIR AYDILFGDTPRPAQAEDLYENLDSFTEK YENEGQRINARKAAREQRKSSAKELPPK PLSRPQQSSAPVQLNSGSQSNRNEYKLY PGLSSYHERVGNFYQPIDLTALYSFEGQ QPGDLNFQAGDRITVISKTDSHFDWWE KLRGQTGIFPANYVTMN
674	8725	A	1626	167	401	
675	8726	A	1627	133	312	VRVGEKLKPCFWPPEANPDP*CYLHLWI LDSQTKSKPVLTS*PPPNGILGTSVCFC FY
676	8727	A	1628	1759	1967	SGCKPLTFPPP*SDSPVKEDPCR/SPPSHP RLPPHSLPALPFTPNPPPKIYTAVSRIW EMKDRCNPI
677	8728	A	1629	167	1378	GNTLVTNMTEFWLISAPIGEKT\CQQTWE KLHAATSKNNNLAVTSKFMNPDFKGWA RWDVLVGLSDELA\KLGCL*EGSWLKE SRLQLHGLDVLEDSKDKVQENLLANGS GLGLPYITKVPSGDMAKYPIKQSLKNISE IIAKGVTQIDNDLKSASAYNNLKGNLQ NLERKNAGSLLTRSLAEIVKKDDFVLD EYLVTLLVVVPKLNHNDWIKQYETLAE MVVPRSSNVLSEDQSYLCNVTLFR/RR AVDDFQDTKPGENKFVVRDFQYNEEEM KADKK\EMDRASD\KKKQFGPLVRWL KVNFEAFIAWIHVKALRVFVESVLRYG LPVNLQHMIFHRNNNPFKPLRQVLHESY IHLDSAA\AIDAPMDIPGLNLSQQEYY PYVYYKIDCNLLKFK
678	8729	A	163	41	1133	HRTYKTKIHLKKQKQSTQATKSRMNAV VPHISILTLNVNGLNVPLKRYRVA*WIRI YQQTICCLQETHLTPNT\KDSHKLKVKG WKKAFHANGHQKQAGVAILTSDKTNF KATAVKKDKEGHYIMVKGLDQQENITL NIYAPNTGAPKFMKQLLIDVRNEIDSNTII AGDFNTPLTALDRSSIQKVNKETMDLNY TLEQMDLKDIYRTLHPTTAETYIYSTVH GTFSKIDYMTGHKTSLNKFKKSEIISSSL DHSGIKLEIDSKRNHQNHANTWKLNNLL LNEHWVKNKIKMEIKTF/FELNDNNGTA YQNLWD\AKAVLRGKFTALNAYIKKYE RAQTDNLRSHLKELEKQQT\KPKSSRRKK K

679	8730	A	1630	569	1050	PLESRRLARSSGGWAGITGTPMNIPTGPD PGPSERSAQPRVWDSTCCLKSNCWFRK VKATTPMSSMMRQIPRMYMNA/WEKV QVVTEGRQHTNEGDHEHDDAQEDEDG WSQEGTFKGFIFLPLNLCIDAHRODQGP NQTCNPSTLGGRGGQITRPGDRDH
680	8731	A	1631	1	595	
681	8732	A	1632	2	1121	ARGCGRSSRSRSHRCLFPFPPPSRRPA SLGPERRPGSSRAAPAASRSLSGLSRASG TASCGRPACPPARSPLPAGPWAARAMG TDSRAAKALLARARTLHLQTGNLLNWG RLRKKCPSTHSEELHDCIQKTLNEWSSQI NPDLVREFPDDLAECTVSHAVEKINPDER EEMKVS AKLFIVESNSSSSTRKVQLTW ACSVLGS/VAQLGFLWIHWLSPPI*KDGG LIFPWEHLQPYWEGI*KNLVQRQKGLP* GTSDLDKTQLEQLYQWAQVKPNSNQVN LASCCVMPPDLTAFKQFDIQLLTHNDP KELAFWKASFQGRLFQGKAFFDISSGTE WGA AVGLLRYSVIVKSRGIKSKGYILQA KRRGS
682	8733	B	1633	63	458	SLENTVSTAISKAQNGAPSWG GYPSIHA AYQLPGTVKPLPAAVQSVQVQPSYAGG VKSLSAEHNALLHSPGSLTPPHKSNVS AMEELVEKVTGKVNIIKEERPPEKEKSS LAKAASPIAKENKDFPKTEE*
683	8734	A	1634	3	2303	EMEGKEDAQKVLKCMYCGHSFESLQDL SVHMIKTKHYQKVPLKEPVPAITKLVP TKKRALQDLAPCSPEPAGMAAEVASE SAKDQKAANPYVTPNNRYGYQNGASYT WQFEARKAQILKMECGSSHDTLQELTA HMMVTGHFLKVTTASKKGKQLVLDPV VEEKIQSIPLPPTTHTRLPASSIKKQPDSP AGSTTSEEKKEPEKEKPPVAGDAEKIKE DSEDSLEKFEPSTLYPYLREEDLDDSPKG GLDILKSLENTVSTVINKAQNGAPSWG YPSIHAAYQLPGTVKPLPAAVQSVQVQT SYAGGVKSLSAEHNALLHSPGSLTPPH KSNVSAMEELVEKVTGKVNIIKEERPPE KEKSSLAKAASPIAKENKDFPKTEEVSG KPQKKGPEAETWEAKKEGPLDVHTPNG TEPLKAKVTNGCNLGIIMDHSPEPSFIN PLSALQSIMNTHLGKVS KPVSPSLDPLA MLYKISNSMLDKPVYPATPVKQADAID RYYYENS DQPIDLTKSKNKPLVSSVADS VASPLRESALMDISDMVKNLTGRLTPKS STPSTVSEKSDADGSSFEALDELSPVHK RKGRQSNWNPQHLLILQAQFASLSETT EGKYIMSDLGPQERVHISKFTGLSMTTI SHWLANVEVTS LRRTGGVTKFLKEPGTQ GHPVFFCNDCASQFRTASTYISHLETHL GFSLKDL SKLPLNQIQRQQNV*KVLTN KTLGPA LGATEDLGSTFQCKLCNRTFAK QARSQTAP
684	8735	A	1635	133	500	YNTVNYKSHPEGQSMCWSMPVITATFG NPRRVDQPLRSGVQDQPGQH GKIPSLK IQKLAGHGAGACL*SQLLGRLRKENCLN/ SPGGGGCSEPSSRHCNPAWAIA*DTI*KIK K*KPPKMRN
685	8736	B	1636	1568	1588	MGDQQLYKTNHVAHGS ENLFYQQPPLG VHSGLNHNYGNAV TGGGMDAPQASPI PHFPQDTRDGLGLPVGSKNLGQMDTSR QGGWGS HAGPNHVQLRGNLANSNMM WGAPAQAEPTDGYQYTSQASEIRTQKL TSGVLHKLDSFTQVFANQNLRIQVNNM AQVLHTQSAVMDGAPDSALRQLLSQKP MEPPAPAIPSRYYQQVPQQPHPGFTGGLS KPA LQVQGHPTQGHLYDYQQPLAQVP VQGGQPLQAPQ

686	8737	A	1637	2	251	FFFFFLINKTKRLFTP*ALQWGYPGSCG SVSQSCKCILRGRSRATISIEAEMVDL
687	8738	A	1638	36	530	NKVLPPAASEHSDCQISKHQVQLCP/PNII TLADIVKDPVSRTPALVFEHVNNDFKQ LYQTLTDYDIRFYMYEILKALDYCHSMG IMHRDVKPHNVNMDHEHRKLRLIDWGL AEFYHPGQEYNVRVASRYFKGPPELLVD YQMYDYSLDTWRMGCM LASMHQKEP
688	8739	A	1639	1	1833	
689	8740	A	164	265	446	
690	8741	A	1640	3	430	
691	8742	A	1641	137	1368	FHISLFEENRVLKQGSPPAAFLNTVTA QISQTSKSQALSQPCSDHVGDPVPKAG HRVYTDVNTHRPREYWEYESHVVEWG NQDDYQLVRKLGRGKYSEVFEANITN NEKVVVKILKPVKKKKIKREVKILGGIW RGGPNITLADIVKDPVSRTPALVFEHV NNDFKQLYQTLTDYDIRFYMYEILKAL DYCHSRGIMHRDVKPHNVNMDHEHRKL *LIDWGLAEFYHPGQEYNVRVASRYFKG PELLVDYQMYDYSLDMWSLGCMLASMI FRKEPFFHGHNDYDQF/VCRAKVLGTE DLYDYIDKYNIELDPRFNGYLGHRSRKP MGTALSNSENQH/LLSSPEALDFDKLLR YDPPSHGLLAREAMEHPYFLHCCEGPRP RNGFHLAMPGCSTPVQQRPI
692	8743	A	1642	874	1183	TPMLEQLGNRYLQNIACYPFNMCTYQ LGCSGSRL*SQHFGRPRQVDHLRSGVRD QPGQQGETPSLLKVQKFSWAWWRTPVI SATWEAEAGEVLEPGRRRLK
693	8744	A	1643	2	498	
694	8745	A	1644	49	538	SQTPMGHFTEDQGLLSKSLWGK/VLNV EKMLGRKKTPLGKGSPLVVPWPDPKR FL*TSFGKTLSPALLPHQWANPPKVKG HHGKEGCLTFPWEDAHKAPLDDPQRAP FAPA*SELHCDKLHVDPENFKLLGWNVL VTVLAIHFVGKEFTPGGCRASWAEDG
695	8746	A	1645	53	393	
696	8747	C	1646	116	379	
697	8748	A	1647	3	200	
698	8749	A	1648	1	637	MRSAARGPRQSCSAFNRFRAANSSSPGF GAPCGRQCWIWESLGKERAKEGKDGLL QSPRTSLKERPKTRITGALPMDHTEGLPA EPPAHAPSPGKFGERPFPKRLTREAMR NYLKERGDQTVLILHAKVAQKSYGNEK RFFCPPPCVYLMGSGWKKKKEQMERDQ CSEQESQPGAFIGIGNSDQEMQQLNLE GKNYCTAKTLYISDSDKR
699	8750	A	1649	111	748	GKREGAGERDQGRRRGESREGWSFGES LWKMAPVVTGKFGERPFPKRLTREAMR NYLKERGDQTVLILHAKVAQKSYGNEK RFFCPPPCVYLMGSGWKKKKEQMERD GCSEQESQPCAFIGIGNSDQEMQQLNLE GKNYCTAKTLYISDSDKRKHFMFLSVKM FYGPTSDDIGVFLASKRIKVISKPSKKKQS LKNADLCIASGTKVALFNRR
700	8751	A	165	283	398	NWQEKCTFQIIGGRKRMSFRILINFFHN* DRTVCYVP
701	8752	A	1650	1	519	IISTD/KAEYTFYEGMGPVFTPVTPVPVV ESLQLNAGGDVAMLELTGQNFTPNLRV/ WFGDVEAETMYRCEQSMCLCVVPDISGF RLEGWRWVRQPVQVPVTLVRNDGINYS TSLATFTYTPEP/GRPHCSAAGAILRANS SQVPPNESNTNSEGSYTNASTNSTSVTSS TATVVS

702	8753	A	1651	238	1713	STMAWIKRKFGERPppkRLTREAMRNYL KERGDQTVLILHAKVAQKSYGNEKRFFC PPPCVYLMGSGWKKIKLQMKDCGCSEQ GSQPCAFIGIGNSDQEMQQNLNLEGKNYC TAKTLYISDLKQKHFMLSVKVFGNSD DIGVFLSKSSKPSKKQSLKNADLCIASG KERWALFNRLLSQTVSTRYLHV/EKEGN FHASSQWGAFFIHLDDDGSEGEFTV *DGYIHYGQTVKLVCSTGMALPRLIIRK VDKQTTLLDADDPVSQLHKCAFLEDTE RKYLCLSQERIIQFQATPCPKENKEKIN DGASWAIISTHKAKHTFYRESGPLSLAP/ VSCPPALSVESLKLNNGGDEPSLKLNR EFQLPKFYKVWFGDVEAEAMYRCGES MLRVVPDVSAF*EGWRVYSQQPIQVSVT LVRNDGIIYSTSLTFTYTPEAGPRPHCSV AGAILKASSSHVPPNELNTNSDGSYTNA STNSTSVTSSTPTVVS
703	8754	A	1652	1	309	FF*DRA*LCPPGWSARSQHTVVSTFLGS SKFSLGPPPELPGDHRHAPPCPANFFYFS *RWGLPMLLVSNSQAQAILPSPFQKGW DYRAWGHHTWGSYLNFE
704	8755	A	1655	1	2325	
705	8756	A	1656	3	128	
706	8757	A	1657	203	2698	SANMGKKRTKGKTPIDDSSETLEPVCR HIRKGLEQGWLKVALVNEWNICQDC KTDWNVKDKAEETENKPSVWLCLKC VGPQGFGRNFSR/EQHALKHLYLTPRSEPH CLVLSLDNWSVWCYVCDNEVQYCSSNQ LGQVVDYVRKQASITTPKPAEKDNGNIE LENKKLEKESKNEQEREKKENMAKENP PMNSPCQITVKGLSNLGNTEFFNAVMO LSQTPVLRELLKEVKMSGTIVKIEPPDLA LTEPLEINLEPPGPLTLAMSQFLNEMQET KKGVVTPKELFSQVCKKAVRFKGYQQQ DSQELLRYLLDGMRAEEHQRVSKGILKA FGNSTEKLDEELKNVKDYEEKKSMPSPF VDRIFGGELTSMIMCDQCRTVSLVHESF LDLSLPVLDDQSGKKSANDTPLTKVTY AECYSEEKYHTDCCY*RSDISSGTRKHL QKKATKQAKKQAKNQRQKQKISGPALH LNDIRTIDHPEDSEYEAEMSLQGEVNITS NHISQEGVMHKEYCVNQKDLNGQAKM IESVTDNQKSTEEVDMKNINMDNDLEVL TSSPTRNLNGAYLTEGSNGEVDISNGFK NLNLNAAALHPDEINIELNDSHTPGTKVY EVVNEDPETAFACTLANREVFNTGEACQIQ HCLYQFTRNEKL RDANKLLCEVCTRRQ CNGPKANIKGEVRKHVYTNAKKQMLISL APPVLTLLHLKRFQQAQGNLRKVNHKIF PEILDAPFCTLKCKNVAEENTRVLYSLY GVVEHSGTMRSGHYTAYAKARTVANS LSNLVLAHGDIPQDFEMESKGQWFHISD THVQAVPTTKVLNSQAYLLFYERIL
707	8758	A	1658	992	1863	GIWRNVHRQPQLESCEPTACSGRACAC CPVSCGWSHGQDWMVPVAGRCTRAQR CCTGGASLPTVHKSTLSSCSAPPADSAA CVFTYFIIF*RQSLNSVAQAGVQWRNL KLLQPLPPAFKAIFCSLLCNWDYRRVP PGLANFCIFSRDGGFTMLVVRLVSN*PC DLPASASQSAGITALSHHAWLLFFETES RSVVQAGVQWCDLGSQAPPGFTPFSC LSLQSSWDYRRPPRPANF/CVFLVETGF HC*PGWSRSPDLMIPPGLSLPKWCDCRR DTKHPASKF

708	8759	A	1659	318	1681	SPRMHALVLLLCIGALLGHSSCQNPASPPEEGSPDPDSTGALVEEDPFFKVPVNKLAAAVSQTSAYDLRVRIQA*APRPNVLPVSLFKCGPTALSAILSLGKRSKRKNPIIHRALYYDLIKQAPDNHGYLIRKLP*HGHPQKKNLKSASRUVFEKKLRIKSSFVAPLEKSYGTRPRVLTGNPRLDLQEIINWVQAIQIMKGKLARSTKEIPDEISIVLL/GV*AHFKGQWETKFDSRKTSLLEGFLGMKERTREGPP*LSDPKGCYAMGLGFRFSACKJCPACPLTGSMIIFFLPVKVTQNLTLNEESLTLRS*FMTIDPRT*KTVAGGPSLSPKLKLSYEGEEHPKFLAGR*SLQSLV*FHPDFSKNITGKPIKLDPRVEHPRLAFEWNEEDGAGNHPPSPRGLQPAHLATFPLDYHLNQPFIFLLRDTDTGALLFIGKILDPGRGP
709	8760	A	166	283	397	NWQEKCSFQIIGGRKRMSFRILINFFHN*DRTVCYVP
710	8761	A	1660	3	340	
711	8762	A	1661	2	500	GKPD PSTKKQHTIWPSPHQGN SPDLEVYNVIRKQSDVSLAETRPDLKNISFRVCSGEATPDDMSCDYDNMAVNPSESGFVTLVS VENEIYGY*DI*KTETDNNGKEMISKILLFSIRKIHRRSMNKLRSRGPVDEHVPTTSCWTPTFWLYPLSQPVIQLDLMRRYL
712	8763	A	1662	3	52	
713	8764	C	1663	92	244	MRCEILVLIPYVYFYSNKLLCSRLXXXXXGGAVLKNPWGGQSLPGLAR**
714	8765	A	1664	336	413	
715	8766	A	1665	233	400	GGAVLKNPWGGPSLPGLAR**FFPYRGAY*NLPGNFWKEPLFLGGDILGQPPFGNL
716	8767	A	1666	194	360	GGAVLKDPWGGQSLPGLARK*FFPYGGPN*NLPGNFWKGPLLWGGDILGQPPYRN
717	8768	A	1667	319	391	
718	8769	A	1668	313	542	ALKQPT/PQTKEERAFDPRVHAE*IPYVFEIHIRST*KTT*NGNPTAPLPVRAPTPARVRTWPNPGHSCAGSHSSR
719	8770	A	1669	143	1316	ERLEIGKELQLVWDEPHLTPGND SLLPSSCCVTAASDLRLGGQPVCRRGTQRPCYKVIYFHDTSRRLNFEEVKFSCRRDGGQLGSIESEDEQKLIKFIENLLPSDGDWFWIGLRRREEKQSNSTACQDLYAWTDGSISQFRNWYVDEPSCGSEVCVVMYHQPSAPAGIGGPYMFQWND DRCNMKNNFICKYSDEKPAVPSRRS*GEETELTPVLPEETQEEDAKKTFKESREALNLAYILIPSIPLLLLLLVTTSVWCWWICRKRKREQDPSTKKQH TIWPSPHQGN SPDLEVYNVSKKTNAKSLSETRPDLRNISFRVCSEESPPDDMSCDYDNMAVNPSESGFVTLVSVESGFVTNDIYEFSPDQMGRSKESGWVENEIYGY
720	8771	A	167	2	1012	AEALVESFWKAKQHTKEELKSQAKDEEKNENEKAKAACSAAMEEDSEASSSTGDSSQGDNNLQKLGPD DVSDTDSIRRVYTRLLSNEKIEIAFLNALVYLSPNVECDL MYHKVYSQDPNYLNLFIIVMENRNLHSP EYLEMALPLFCKAMSKLPLAAQGLIRLWSKYNADQIRRMETVQQLITYKVISNEFNSQNLVND DDAIVAASKCLKMIYYANAYAVTKNLGLYYDNIRMYSERITVLYSLVQQQQLNPYLRLIVRCDHIIDDALVRL EMITMENPADLKQFY/RGI*RRTRWVAAFWDRASEPKANSIGFGGSQLWMPTPVASYT

721	8772	A	1670	18	686	SPPPPPPAREMNFVRAANRRPRRVSRRPR VQQQQQQPPQPPPPQPPQPPHQQPSS PPQ*QQQQHPPASSPPPPPLQERNNVGE RDDDDVPADMVAEESGPGAQNSPYQLRR KTLLPKRTACPTKNSLEGASTSTTENFG HRAKRARVSGKSQDLSAAPAE\QYLQEK LAPDEVVLKIFSYLLEQDLCRAACVCKRF SELANDPNLWKRLYMEVFETRPMMH
722	8773	B	1671	155	310	MAAIRKKLVIVGDGACGKTCLLIVFSKD QFPEVYVPTVFENYVADIEVDGKQ*
723	8774	A	1672	162	877	AMAAIRKKLVIVGDGACGKTCLLIVFSK DQFPEVYVPTVFENYVADIEVDGKAGRS LACGDTAGQEDYDRLRPLS*PDTNDVILA MCFSDSPDSLENIPIKSWTEPVKHFIC PNGGPSILVGELERRVLSGIDGATQGRGLR PRLKAGSPVET*RKGRDMGKQGLALFG YIGSCSSQRPKDWEVEEVF*KWATESL LWQA*TLGKKKSGVPLSLVKPLLAQPL MRLIFEVLFINLSV
724	8775	A	1673	1	711	
725	8776	A	1674	1	2647	MGVTSAAAGLVGSAPQCVALPSEGWTL AVWPVAACTCSGVSSPKLTPGSFVHCP WFLLLTEATRAEIKRPFKAELKASVRP MEGSHCWGGEARRTSQGHTEQKGELRA RRQAQNEDEDVKEVWVGKTKKEESDKL GCQGAWVPPRVPSWIGRFELWVVGWYE QPAVSWQMRVVRLRLRAALTLLGEVP RRPASRGVPGSRRTQKSGGARTDSAWR RALTVISTPGTSRMDPVALVAVGGPRR FPGGHTLQRLPVALRTLIPADQAHQAPN STTWLGSRAGLLALAAGLGGRDSAAHG PLQVGGMGGYTGMGSEVRWEKEKHED GVKWRQLEHKGPFYAPPYEPLPDGVRFF YEGRPVRLSVAEEVATFYGRMLDHEY TTKEVFRKNFFNDWRKEMAVEEREVIKS LDKCDFTEIHRYFVDKAAARKVLSREEK QKLKEEAELQEQEFGYCILDGHQEKIGN FKIEPPGLFRGRGDHPKMGMLKRRITPE DVVINCSRDSKIPEPPAGHQWKEVRSDN TVTWLAAWTVESVQNSIKYIMLNPCKSL KGETAWQKFETARRLRGFVDEIRSQYRA DWKSREMKTQRAVALYFIDKLALRAG NEKEDGEAADTVGCCSLRVEHVQLHPE ADGCQHVVVEFDLFGKDCIRYYNKVPGE KPVY*NLQLFMENKDPRDDLFDRLTTTS LNKHLQELMDGLTAKVFTYNASITLQE QLRALTRAEDSIAAKILSYNRANRVVAIL CNHQRATPSTFEKSMQNLQTKIQAKKEQ VAEARAELRRARAELKAQGDGKSRSVL EKKRRL*KLQEHHLAHLVQATDKEEN K\QVALGTSQNLNLDPRISIAWCKRFRVP VEKIYSKTQRERFAWALAMAGEDFEF
726	8777	A	1675	2002	2238	KGDFTKLPC/C*SVPAFY*RLKICCSIY LV*YMSVSVIESICYKYTVFCRG
727	8778	A	1676	3	428	
728	8779	A	1677	263	899	ISYQEGTSAIQRK*QEVTLRK*TQESE/SA GNDSASTAPRSTEESESVFTESELSPIR EELVSSDELRODKSSGASSESQTVNQA EVESLTVKSESTGTPGHLRSDEHSTNEV GTLCHKTDLNNLEMAIKEDQIADNFQGI SGPKEDSTSIKNSDQDSFLHENS LHQEE SQKENMPCGETAEFKQKQSVNKGKQKG EQNQDFTGQRAG
729	8780	A	1678	1165	1530	VKNNGNEVIICHFHLTFGIYLLFFETEFCS CRPRLECNGAILAHCNLRPLPGKRFSCF SLPCC*DYRHLP RPVKFFVVLVETGFHY LGQAGLKLLTPGDL/PPPLGLPKCVSHCA QPRVSTF

730	8781	A	1679	197	843	RLFSSNQTVDHQSQKNVDITLKGTPQ*SC KGPRGTLRIRDFNHIKCGTSALLGKEKK RGFRVDKWWGSRRELGYFPGTICSHV QDHDPRGVTGASRYQDEGPVYASPSPH PTVGLSQENGSSLLKSRNFFGVKKYIPQG FRMRPGCLLVSVSQGPRKE*INPLKGNDI *ALLQIPAALIPASPTRLKTGIRKFFGW VSMSLEKGTVPGLIE
731	8782	A	168	966	3172	
732	8783	C	1680	27	218	MLMADIRKEERNHLCRSSRRTWTILDRA EYSDHVVLQGAGVGWGTSPFLYSFEI PYGAQVA*
733	8784	A	1681	490	773	HPQIFVPGQESFNDRIKQPVEGLVVLRE HERHSPSLRLHLEATQRLRHPGLLRG ELLWLIRFIQTLPLPFAAKGPTRGAGIY PRGKQPVEGLVVLREHERHSPSLRLHLE ATQRLCHPGLLRGELLWLIRFIQTLPL LPFAAKGPTWGAGIYPRGKQPVEGLVVL REHERHSPSLRLHLEATQRLCHPGLLR RGELLWLIRFIQTLPLPFAAKGPTWGA GIYPRGKQPVEGLVVLREHERHSPSLRL HLEATQRLCHPG/LPQAQGRAPSLAHHQI HPNTPSSFCSQGTAGGWDLPOGQAAC
734	8785	C	1682	48	80	MGLWLFEHIY*
735	8786	A	1683	858	1055	
736	8787	A	1684	1	103	VFFLFGGDGVS LCHPGWSAVA*TQEAE PFVQII
737	8788	A	1685	451	785	CSQDGGRLRDLVRHPQTFVPGQESFND RIKQPVEGLVVLREHERHSPSL/PASS*G HTASPPRSPQAQGRAPSVAPPTTPQICP TTPSSFSKRITYAGGWDLPOGQADC
738	8789	A	1686	1	1335	MNDDIRSDLPDWRDRTPCVQKKAMD RTKTRFRKRGQITGKITTSRQHPONEQS LQRSTSGYPLQEVVDDEVLGPSAPGVD SPPCRSLGWKRKKEWSESEEEPEKELA PEPEETWVVEMLCGLKMKLKQQRVSPIL PEHHKDFNSQLAPGVDPSPPHRSFCWKR KREWWDESEESLEEEPRKVLAPPEEIIW VAEMLCGLKMKLKRRRVSLVLPHEHEA FNRLLDPVIKRFLAWDKDLRVSDKIPSE PTI/HGSITQNPSSGFSDLHPTFEYPSIQFP NEYSHPNTEGGCQS*ARDSPLPS/VSGKL TSAGGLSWWCP*APT*FLSSATWPMW RRTTRTPNKTSTSCMGRPALAYPWSVT VGSSYAVA*TPCVQKKAMDRTKTRFRK RGQITGKITTSRQHPONEQSLQRSTSGY PLQEVVDDEVLGPSAPGVDPSPPCRSLG WKRKKEWSESEEEPEKELAPEPEETWV VEMLCGLKMKLKQQRVSPILPEHHKDF NSQLAPGVDPSPPHRSFCWKRKREWW ESEESLEEEPRKVLAPPEEIIWVAEMLCG LKMMLKRRRVSLVLPHEHEAFNRLLDP VIKRFLAWDKDLRVSDKIPSEPTILGASP KTLPLASQICIRPSNTPSRNFQMSVTPT LRVGASPELGTVPYPLPLWEADLSRRPLL VPLSTNLISVLSYLANDMEEDDEDPKQ NIFYFLYGKTRSRIPVRNRRFQLCRCLN PRARKNRSQIALFQKLRFFCSMSGRA WVSREELEENTGPRGDVDFQQELYSNA NGRQQERGEEPFVQII
739	8790	A	1687	385	889	LEPTLTEQGYARAVLPQEVEDVLFGLV VLLHVIGQVESQEEMNALVLPGEAGP AEIRYDHSQEILVRHPQIFVPGQESFNDRI LKQPVEGLVVLREHERHSPSL/PASS*GH TASPPRSPQAQGRAPSVAPPTTPQIGPT TPSSFSKRITYAGGWDLPOGQADC

740	8791	C	1688	1	1869	MDSPTPHDPAAPLLVTVLESVQKKTDR TETSFGEIGQILGKIMTSHQPQEQEQSPQ RSTSGYPLQEVVDDEVSGPSAPGVDPSPP RRSLGCKRKRECLDESDDPEKELAPEP EETWVAETLCGLKMKAKRRRVSLVLPE YYEAFNRLLAPGVDPSPPRRSLGCKRKR ECLDESDDPEKELAPEPEETWVAETLC GLKMKAKRRRVSLVLPEYYEAFNRLLA PGVDPSPPRRSLGCKRKRECLDESDDPE KELAPEPEETWVAETLCGLKMKAKRRR VSLVLPEYYEAFNRLLAPGVDPSPPRRSL GCKRKRECLDESDDPEKELAPEPEETW VAETLCGLKMKAKRRRVSLVLPEYYEA FNRLAPGVDPSPPRRSLGCKRKRECLD ESDDPEKELAPEPEETWVAETLCGLKM KAKRRRVSLVLPEYYEAFNRLLDPVIK RFLAWDKDLRVSDKIPSEPTILGASPKTL PPASRICIRPSNTPPPRNFHMSTVTPMLSY LANDMEEDDEAPKQKIFYFLYGKTHSHI PLRPKHWFQLCRPMNPRARKNCSQIALF QKRRFQFFCSMRCRAWVSPEELEENTGP RGDVFQQELYSANGRHQEGGEEPFFV QII*
741	8792	A	1689	520	1235	WTDFRSIGLMALAGSVLEFSARSKDATP DPP/LGTGKVPSTAPTGAAPPGLPTAAFD VVLHPFRAGRKKYFPSLLFA*WLCQRSS P*RGADPVIGLYLVRGGACQTPTLGNR QTPRLGIHARPRRRATTSLLTLLAFGKN AVRCALIGPGSLTSRTRPLTEPLGEKERR EVFFPPRPERVEHNVESSRWEPRRGAC GSRGGNFPSPRGGSGVASLERAENSSTEP AKAIKPIDRKSVHQICSGPVVPSLRNAV KELVENSLDAGAH
742	8793	B	169	1	2187	MAGKASESWRKVKDTSCMAVTRENEK DAKAETPDKTIRSRETYYYHKNSMWETAP MIQIISQGVPTPTTHENYGSTIQDEIWCLTN FCLDDMLSFLVLESCTNHCAYCLNVWYR KRAAAKHLYERYHHQTEGCGNEACTN EFCASCPTFLRMDNNAAIKALELYKIN AKLCDPHPSKKGASSAYLENSKGAPNNS CSEIKMNKKGARIDFKDVTYLTEEKVYE ILELCREREDYSPLIRVIGRVSSAEALVQ SFRKVKQHTKEELKSLQAKDEDEKDEDE KEKAACSAAMEEDSEASSSRIGDSSQG DNNLQKLGPDDVSDIDAIRRVYTRLLS NEKIETAFNLALVYLSNVVECDLTYHNV YSRDPNYLNLFIIVMENRNLHSPEYLEM ALPLFCKAMSKLPLAAQGLIRLWSKYN ADQIRRMETFQQLITYKVISNEFNSRNL VNDDDAIVAASKCLKMVYYANVVGGE VDTNHNEEDDEEPIPESELTLQELLGEE RRNKKGPRVDPLETELGVKTLDCRKPLI PFEFFINEPLNEVLEMDKDYTFKVVETEN KFSFMTCPFILNAVTKNLGLYYDNIRRM YSERRITVLYSLVQGGQLNPYLRKVR DHIIDALVRLEMIAMENPADLKKQLYV EFEGEQGVDEGGVSKEFFQLVVEEIFNP DIGMFTYDESTKLFWFNPSSFTEGQFTF IGIVLGLAIYNNCILDVHFPHGLSTGS*
743	8794	A	1690	2176	2641	RKTIEEKADPKLQGGFFVCLFVLETESCSA SQAGMEWPNLNSLQPPPPGFTQFLC/SQP PE*LGLTGVPPhQAHCIFSRDGASPC*P GWSPTPLGLKRSTCFSLKWCWYRHEPPR LAYFLALFNRDEGLAMLPRPVNSWPQVI LLLWPPSVLGFQA
744	8795	A	1691	112	410	

745	8796	A	1692	2148	2510	SQHFGKLRQEDHLRSGVREQPGQHKGKT PYLLKIQKLVAGHGGMCLYSQLLMRLRQ ENGVNPGGGACNEPRLRHCTPAWVTEQ DSVSKKKTVHKKKLNWGSVHRGET*RT SPCVALDTAHL
746	8797	A	1693	178	730	IFFFFKMESCSVAQAGVQWRDLGSLQ APPRGFTPFSCSLPSSWDYRRPLPRPAN FFYF**RRGFTVLATMVIS*PHDLPTLAS QNAGITGVSHHTQPVYALFFSFETEFCV VAQAGGQWRDLGSPQPPPRFKQFSHLS LPSSWDYRHAPPSLANFFCIFSRRDRVSPS WSGWSRTPDLR
747	8798	A	1694	2	780	CWGLRRQRSQDVTMAWALLILTLLTQ GTGSWAQSALTQPPSASGSLGQSVTFSC SGTSSDIGNYNYVSWYRQHPGKAPKLM YEVTKRPSGVPEARFSGSKSGNTASLTVS GLQSEDEGDDYCCSMARHHS/VGWVF GGGTQVDP SLGQPKRAALGSLCFPPSLG EASSQPRPTLVVISDFLPGKP*TV*A*KA DSSPVKAGVETTPTPSKQSNNNYAATS YLTLTPEPLKVPQEATACRVTPEGGTLE KTVAPECS
748	8799	A	1695	103	532	
749	8800	A	1696	112	1158	SCGLGHRKTFSFVSLPARNETQPKACRE QNMEGDFSVCRNC*RHVV SANFTLHEA YCLRFLVLCPECEEPVPKETMEEHCKLE HQQVVGCTMCQQIMHKSSLEFHKANECQ ERPVECKFCKLDMQLSKLELHESYCGSR TELCQCGQFIMHRMLAQRDVC RSEQ AQLGKGERISAPEREIYCHYCNQMIPEN KYFHMGKCCPDSEFKKHFPVGNPEILP SSLPSQAAENQTSTMEKDVRPKTRSINRF PLHSESSSKAPRSKNKTLDP LLMSEPKP RTSSPRGDKAAYDILRRCSQCGILLPLPIL NQHQEKCRWLASSKRKTSEKFQLDLEK ERYYKFKRFHF
750	8801	A	1697	343	586	KQKTSFSSLP RR VNCNSHLVLL/RCDFK NCNLAFETKICQFIKST*EYMF GFIFLCFF LLYNIPFHICGPRVKSSFCYRH
751	8802	A	1698	217	360	
752	8803	A	1699	1	390	WEEIQELNEVARHRPRSTLV MGIIQQENR QIRELQQENKELRTSLEEHQSALELIMSK YREQMFRLLMASKKDDPGIIMKLKEQHS KELQAHVDQITEMAAVMRKPLKLT SNR VARNKNEYFNLNKKTKA
753	8804	A	17	214	464	FCGLLLHPVSADF*PAELINTQEPQERC QLDTGESSRVQHTLPSCP VQCGTAELS RNV MIGASELKCLHPSPKLEYILPGN
754	8805	A	170	270	497	MHFLKAGRGG SRL*SQHFG RPRWADHE/ RSGDRDNRG*HGETPSLLKNTKKN*PGT VAGALVASTREAEAGEWREPG
755	8806	A	1700	386	790	NSIMEEIQELNEVARHRPRSTLV MGIIQQ ENRQIRELQQENKELRTSLEEHQSG LGN L**AKYREQMLRLLMASKKDDPGIIMK LK/EQHSYD*HWYIVTSPKDSSLMHLDTS LKHLNMDWREGTWKQIRMYTK
756	8807	A	1701	1089	1295	CPPPLFF FETEF RSCCPGWSNSSLHRPPPG FKQFILNFLG*K/PSYPYLAQSCARMCV CVCVCIIFTET
757	8808	A	1702	2	367	RDNTSPISVILVSSGSRGNKLLFRYPFQRS QEH PASQT/RFS DVILATILATKSEMCGQ KFELKIDNVRVFGHPTLLQHALGQISKTD PSPKREAPTMILFNVVFALRANADPSVIN CLHNLS

758	8809	A	1703	1	452	RCQYSTREAKLI/LALQD/EVSAMAD/GN E/GPQSPFHILPKCKLARDLKEAYDSL TSGVVRHLHINSWLEVSFCLPHKIHYAASS LIPPEAIERSLKAIRPYHALLLSDEKSLL GELPIDCSPALVRVIKTTSAVKNLQQLAQ DALLPPRLP
759	8810	A	1704	1	468	
760	8811	A	1705	2	118	
761	8812	A	1706	1	671	DADSRFSEVF/LATILATQFEMCGQKFEL KIDNVRVFGHPTLHRHALGQISKTDPSPK REAPTMLFNVGFALRANADPSVINCLH NLSRRIATVLQHEERRCQYLTREAKLILA LQDEVSAMADGNEGQSPFHILPKCKL ARD/PQLWLPNQQR*HDPHQPHGQLQR RATSQRGLATEPEDDGEPAGQPVGA*TR SHPQCTRSPEP*GPPHVCQAPSLPRP
762	8813	A	1707	230	345	
763	8814	A	1708	464	763	
764	8815	A	1709	3	156	GRHHL/EEEIMYNENTRGSQLLMLF*QSF AACWMVTTHEDPVIQVQALLP
765	8816	A	171	2	421	PAWLSRFTCAATYIKMPEE*ETHYQPM EEEADTFTY/EAKMAPLML*INTFYSSKE ISLRELISNSSD/AK*LINQSDGFRVNL GVLNA*INIFC*QALDKIRYESLTDPKLD SGKELHINLIPNKQDRTLIVDT
766	8817	A	1710	1	1878	FRGTWAPSASGSVLLRLPPPPAPSSSGPL RPRPRPHGGMRDNTSPISVILVSSGSRGN KLLFRYPFORSQEHASQTSKPRSRYAAS NTGDHADEQDGSFSDVILATILATKS EMCGQKFELKIDNVRVFGHPTLLQHVAL GQISKTDPSPDEGKAPTMLF*CWLFAL RANADPSVINCLHNLRRRIATVLQHEER RCQYLTREAKLILALQDEVSAMADGNE DPKPPFHILPKCKLARDLKEAYDSLCT SGVVRHLHINSWLEVSFCLPHKIHYAASS LIPPEAIERSLKAIRPYHALLLSDEKSLL GELPIDCSPALVRVIKTTACERTCRQLA QDADLALLQVFQLAAHLVYWGKAIHY PLCENNVYMLSPNASVCLYSPAGSSSS HQFPFSWTWPSVLAKFSLPVFLCQNFN PLAPRCARRTQLH/IQMVVWMLQRRILL IQLAHTYVCLMASPSEVEPRPRVEDDVPF TARVGGSLSTPNALSFGSPTSSDDMT LTKPQAWTTSAELLPSGDSPLNQRMTE NLF/APSLSEHERAAILSVPAQNPEDKN MFA/RGILHYFRGRHLEIMYNENTRRS QLLMLFDKFRSVLVVTTTHEDPVIQVQ ALLP
767	8818	A	1711	1	613	PLKRSDGCNDGRPTRPPTRPDTTVFTSNL KQTRMVHLTPVEKSAVTALWGQA*TW MKVGGKALGK/RCWVVPWDPKRSFEV LWGNLSQLPDAVNGANP*R*KASMAKE KVLGCPLEWPLAHLADNLKGHPHTE VNLNCDKLRGSLKNFRLLGQTCLVC VPGPINFWQKNSTPTSCACLIKSWLA WCWLNALGPTSIT
768	8819	A	1714	97	424	SPALWEAYDGWITLRSQVQD/QSGQHGE MPSLLKIQKLAGHDGECL*SQLRLRR ENHLNLGGRGCSELRSRYCIPAWAPEIAP LHSSLGDLNKTLSQKTKTVSFYI
769	8820	A	1716	18	367	SPPPPRTRTWPLRRPRLSLGTRAASLR FSSRKPCQNKPDYGLRSEKFR*SRK/A*G RQRP/PREKFPLFPKKPIEPGEAKPGEIV NGSVRPPNMPLYIPTSIAPYFTFLAVLT L

770	8821	A	1717	47	409	NSYIYMCIIYSYINTIYIHIYLESNISLPLNI YISTPT/HIY*RHTV*VHTKAYVHML*HV YIHFCLCVHKSFKGTIYRDASFLESCSKV NTECHKLRKVKRKYSRIHHTGIHQSSFIM RKMS
771	8822	A	1718	89	1560	IMKHTNPEPGSFSRFYSLKVAPKVKATA APVAGAPPQPDLEFTKLPNGLVIASLEN YSPVSRIGLFKAGSRYEDFSNLG\TTHLL RLYIQS*RTKGASSFQDNVPVIGRQLGGQ IKC*PQQGENMGLYWWECLARGDVDNL MEFLIVTTVAPEFRSLGK*VNLQPQLKVI DKAVAFQNPQTHAIGNLHAAA/YTGN ALANPLYCPDYRIGKVTSEELHYFVQN HFTSARMALIGLVSHPVLKQVAEQFL NMRG\GVGLSGWQRANYRGGEIREQNG DSLVAFAFVAKSAVAGSAKPNFVSVLQ HVLGAGATMSRGAATTTSHLHQVAVSQ ATQQPFVDVSAFNARYSDLGFGNYTISQ GHQLAGDCIKIAIYNQVKPIRSKKPFFP TQGVSAAKNKG*KAGIPLMVQWKSFLK CSPGRKSGSPGLLV/GLVPYMPHTPTVPS SQMDSSGLMLDIIN/ARAKKFVFWARSS MGSKFGKFGDITPFCMEL
772	8823	A	1719	53	420	
773	8824	A	172	1	267	CSAGGPWRAPQPRRFHRRRRAQLPPPL PLPPLPASPRIHNRTFPRPSQRTPPPAALG CPEPGS/RSQGRGHARPPGSGEGDPTVSS PGY
774	8825	A	1720	1	1260	
775	8826	A	1721	403	1334	DTMALTSDLGKQIKLER/EVEGTLLQPAT VDNWSQIQSFEEKPDDLICTYPKAGTT WQEIIVDMIEQNGDVEKCQRVAIIQHRVHP FIEWARPPQPSGVEKAKAMPSRILKTSP FHFSWLPPSFWEENNCKF/LFMLASEIAK D\CMVS*YHFQRMNHMLPDPVTWKEY FETFINGK\VFWSWF\DHVKG\WW\EM KDRHQ\N\FLFYEDIKRD\PKHEIRK\VMQ FMGKKVE*TVLDKIVQETSFEKIKENPM TNRSTVSK\SILD\QSIFPPFMRKGTVG\D WENHFTVA\QNERFDEIYRRKMEG\TSU NFCMEL
776	8827	A	1722	2	645	HGIQAHGQIPSYKTIGGRDSSFHTFFSET GAGKHVPRLLL*NWKPTVMDEVRTGT CQLFHLEQFITARKIAANNYARGHYTIG KEIIDLVLDRIKLADQCTGLQGFVFS FGGGTSGGFTSLLMERLSVDYGGKSKLE FSIYPAPQVSTAVVEPYNSILTTHTLEHS DCAFMEEGEFSEAREDMAALEKDYEYEV GVDSVEGEGEEGEEY
777	8828	A	1723	87	1531	SLATMRECISIHVGQAGVQIGNACWELY CLEHGIQPDGQM/TQVTRPLGGGDDSFN TFFSETGAGKHVPRAVFDLEPTVIDEV RTGTYRQLFHPEQLITGKEDAANNYARG NYTIGKEIIDLVLDRIKLADQCTGLQGF LVFHSFGGGTSGGFTSLLMERLSVDYCK KSKLEFSIYPAPQVCTAVVEPYNYILTD HTTLEHSDCAFMDNEAIYDICRRNLDI ERPTYTNLNRLLISQIVSSITASLRFDGALN FTLTNFGTKLVFPRIPLPFCPIMPPVHFA *ERPPMNSFSVREITQMLCFEPSPTRLVK CDPRPWVKSWPCLVATGGDVVPKRC QMLPIAHPSPKPKRTIQFVDWCPTGFKV GINYQPPHWPVGGNLAKVTREAVCML SKHHSPFAEAWARPPTSFDLMLCQACP FVHWYLGVEGMEEGEFSEGRER*GCPFR KDYEK\VGVDSEGEGEEGGKILIIHSLF G

778	8829	A	1724	84	1560	EATTSPRLRLHQLSREAATMRECISIHV GQAGVQIGNACWELYCLEHGIQPDGQM PSD/RKPLGEGDDSFNTFFSETGAGKHVP RAVFDLEPTVIDEVRTGTYRQLFHPEQ LITGKEDAANNYARGHYTIGKEIDLVL RIRKLADQCTGALQGFLVFHSLGGGNWV LVPPPPCLQLGGGGAGKRLSVDYGOEVP SWEFSIYPGAPRFPQPVVEPYNFHTNPT PTLGAL*LCPSWVDNEAIYDICRRNLDIE RPTYTNLNRLLIGQIVSSITASLRFDGALN VDLTFQTNLVPYPRIHFPPLGHIMPPVIFA EKAYHEPAFL*QRSQMLCFEPANQM/V KCDPRPGKYMLCCLLYP/GDVVPQRISF LPLPTIKTQ/RLTIHFLDWSPTDFKLVIN QPPTVVPGADLTQVQRAVCMLSNITAI AEAWARLDHKFDLMAKRAVHWHYVVG EGMEEGEFSEAREDMAALEKDYEYEVGV DSVEGEGEHEEY
779	8830	A	1725	153	380	EYKQNRFLRSPRLDCSGAISAHNCNLC LPGSNASHASASK*AGITGMHHHAWDN FCILFSRRWGFCHVGQGW
780	8831	A	1726	14	322	IFSSEPLEGRPGRGGARAACQGEAGK/ AGAAGD*PSP/PG*GHAAAPKCREFGHN QIDAGWNQRP/GKPGLVPMWEPCQPSC PLELSEFPPGAHSSWTSNSIY
781	8832	A	1727	605	3133	DSRGQEG*RTGAPHMGDKGPGVSGPPG FQASIKFGCGQNFSPITLGPGP/PWGGC GQALSPSGVPGLEGVSPTRAKGWRFP KAPETLNERQIYP/NAPPS*AG*GHADTE GQDRTPHLLGANSSGHLGGLPF*SASIG GAGRD/SQGLSRAFSSASKHSVPASAGTF *HSFSKG*VSKTTTTNAGNALFPMGSSK TKKPNSHQRGMGS*GRNPPSLGRAPAP LPEREAPIAPQLGPSAAGTSRQVGQKSS TSP/PPGRGGNIEP*TQEERRKEKMKAT GLSKHQPAFQONE*NLKGAGEF/GP/SGL AGSQNPSSKLQGLGKGC*EQRL**GAG PDCSPLGKHTP*RSPSPLPRTGDASRG/S GFSGKEASFPGQPQSTCLSGIRPSLGS*P LGQ*RTL/PCSNLPAGK/RNCLG/PPGLGR GHGRCDLSQHGSQT*AGANWRKRQ/PP VPAGLLDPGLTAQQAQVTRSPWEGAQ RGGEGPVGLCWG*ACAKCRLQGSRTF AGGRQGSRSVWVGSEVMAPKRPPAG PPGHKEGTAEAVSSQTVTGGRPEAVWP HHHQKGTTEQEPCC*DVTKASAPGV GDTG/MRGPLQPQASPN*GAAACPFSSQR AGSSLQRRSLPAPSCPQAA/RGPPGLPG LPSSGSEENIHSGAWALVGQEGPSMDGR GNGMMLRGVWTVGHGGMDMWRRG DLKGKVPHGMIQVWTP/G/DKQDSSPAR TPAPQWLSITTGS*TPE/GDPGGKLDAAQ RGRAIAAHEQPEVAVLGVA/GHL*SPGS ARSSPRWPHRSACRPPRSGSPSPSSA *KSDRTDAGAGVAAAASPGAGAPAHCP QGPPRSCQGPQR
782	8833	A	1728	1096	1748	ELFPPTSTIALAQLRALTAQAGPLTQVN QGAFSMP/WVLDPRERGLKIKPSFLLL WGWAHLGFQHEALWALGCAFIEERGGE REAFLGPMEFSWGGFAHPCP*THQFWPG EPQ/EV*GGRHCGKAPREKWPALAPTFQ KEKPVVPVTPEAIPVCQEGAPPGTAKSIH CPPEIHTKEACVPVGKEENVPGKRKIWS KKRDRQGRAQESRIQGSSEIP

783	8834	A	1729	162	788	QKLFFLAENIIRSFSRSTVKTLSFVLNQMM CFISVFDVFSFFSPGFTSFVISLCFGFAAN LIGLGLAAKALDSGAFFSFVVLSPSFPLPS CPHHFTLLKVIMNTRSEIPFLAPSTLGFFE MESHCVTQ/CSGA/ISAHCSLHLP*SNFP VSAS*VAGTTGASHDNWLIFLFLVETGF HHADQGGCLKF*PQIIHPLGLPKWGLQC EPCGWL
784	8835	A	173	218	430	
785	8836	A	1730	158	468	TGAGHGGLMPVIPSHFGRPWRADHLRS GVRDQPGQHG*NPVSTKNTKIGWA*WR APVIPAT*EGLRQGESLEPGRAEGARRC HYIPAGGDRVRLCLKKKKLN
786	8837	A	1731	1	1161	
787	8838	B	1732	1	1380	MDKFLDITYTLPRINQEELESNRPITASEI VAIINSLSSKSPGPDGFTAIFYWSVGSA GQAIRQEKEIKGIQLGKEEVKLSLFADD MIVYLENPIVSAPNLLKLISNFSKVSQYKI NVQKSQAFLYTNNRQTESQIMSELPFTIA SKRIKYLGIQLIRDVKDLFKENYKPLLKE IKEDTNKWKNIPCSWVGRINIVKMAILPK VIYRFNAIPIKLPMTFFTILEKNTLKFIWN QKRARIAKSILNQKNKAGGITLPDFKLY YKATVTKTTWYWHQNRDIDQWNRTEPS EITPHIYNLIFDKPEKNKQWGKDSL FNK WCWENWLAICRKLKLDLFTPYTKINSR WIKDLKVRPKTIKTLEENLGITIQHIGMG KDFMSKTPKAMATKAKIDKWDLIKLS FCTAKETTIRVNREPTWEKIFATYSSDK GLISRIYNELKQIYKKKQTPSKSGRRT*
788	8839	A	1733	1	293	
789	8840	A	1734	1	1183	MKLKRNNEMSGKALDPREGFCDASYEI QTTIREYYKHL YANKLENLEEMDTFLDT YTLPRLNQEEVESNRPITGAIEIVAIINSL PTKKSPPGPDGFTAIFYQRYKEELVPFLL KLFQSIEKEGILPNSFYEASIIIPKPRDIT TKKENFRPISLMNTDAKILNKILANRIQQ HIKKLIHHDQVGFIPGMQGWFNIRKSINV IQHINRAKDKNHLIISIDAEKAFDKIQQPF MLKTLNKLIGDGTIFYKI/Y/RDRHFSKEDI YAAKKHMKKCSLSLAIREMQIKTTMRY HLTPVRMAIHKSGNNRCWRGCGEIGTL LHWCWDCKLVQPLWKS VWRFLRDLEL EIPFDPAIPLLGVPKDYKSCCYKDTCH/ IMFIVALFTIAKTWNQPKCPTMIDWI
790	8841	A	1735	66	1392	QVLLSFGTPLVLTTKREKNQIDAINKDK GDITTDPTIEIQITSIEYYKHL YANKLENLE EMDKLLDITYTLPRLNQEGVESNRPITG SEIEAIINSLRPISLMNIHAKILNKILGN*IQ QHIKKLIHHDQVGFIPGMQGWFNIRKSIN VIEHINRTKDKNHMIILIDAEKAFDKIQQPF FMLKTLNKLIGDGTYLKIRAIYGKPTVN IILNRQKLEAFPLKTGTROGCPLSPLLFNI VLEVLAIRQEKEIKGIQLGKEEVKLSL FADDMIVYLENPIISAQNLKLTGNFSKV SGYKINVQKSQAFLYTNNRQTESQIMSE LPFTIASKRIKYLGIQLTRDVKDLVKENY KPLLKEIKEDTNKWKNIPCSWVGRINILK MAILPKVIYRFNAIPIKLPMTFFTELEKTT LKFIWNQKRACIAKSILSQKNKAGGITLP DFK
791	8842	A	1736	1	432	
792	8843	A	1737	1	413	
793	8844	A	1738	1	1401	

794	8845	A	1739	1	510	MLEVLAWAVRQEKEIKGIQLGKEEVKLS L*LMSNFSKVSQYKISVQKSHAFVYTNN RQSESQIMSELPFTVATKRIKYLGIQLTR DVKDLFKENYKPLLNEIQEDTNKWKNIP CSWVGRINIVKMAILPKVIYRFNAIPIKLP MTFFTELEKTKFIWNQKRAHIAKTIL
795	8846	A	174	9	201	
796	8847	A	1740	1	2052	
797	8848	A	1741	1	762	MNIDAKILNKILAKQIQQHIKKLIHHDQV GFIPGMQGWFNIRKSINVIQHINRTEDKN HMIISIDAEKAFDKIQQPFMLKPLNKLGI DGTYFKIIRAIYDKSTPNILNGQKLELMS NFSKVSQYKISVQKSHAFVYTNNRQSES QIMSELPFTVATKRIKYLGIQLTRDVKDL FKENYKPLLNEIQEDTNKWKNIPCSWVG RINIVKMAILPKVIYRFNAIPIKLPMTFFT ELEKTKFIWNQKRAHIAKTIL
798	8849	A	1742	1	1057	
799	8850	A	1743	1	1380	
800	8851	A	1744	1	862	MDTFLNTYTLPRLNQEEVESLNRPTGSE IVAIINSLPSKKSPGPDGFTAKFYQRYKE ELVPFLLKLFQSIEKEGILPNSFYEGSIILIP KPGRDPPKKENFRPTSLMNIDAKILNKIL ATRIQQHIKKLIHHDQVGIIPGMQGWFN PKSINVIQHINRAKDKNHMIISIDAEKAFD KIQQPFMLKTLNKLIGIDGTYFKIIRAIYD KPTANIILNGQKLEAFPLKTGTROGCPLS PLLFNIVVEVLARAIRQEKKIKGIQLRKE EVKLSLFADDMIVYLENPIVSA*RLNQEE VESLNRPTGSEIVAIINSLPSKKSPGPDGF TAKFYQRYKEELVPFLLKLFQSIEKEGIL PNSFYEGSIILIPKPGRDPPKKENFRPTSL MNIDAKILNKILATRIQQHIKKLIHHDQV GIIPGMQGWFNIPKSINVIQHINRAKDKN HMIISIDAEKAFDKIQQPFMLKTLNKLGI DGTYFKIIRAIYDKPTANIILNGQKLEAFP LKTGTROGCPLSPLLFNIVVEVLARAIRQ EKKIKGIQLRKEEVKLSLFADDMIVYLEN PIVSA
801	8852	A	1745	1	1551	
802	8853	A	1746	1	947	
803	8854	A	1747	179	887	
804	8855	A	1748	1	1074	
805	8856	A	1749	1	1060	MDTFLDITYTLQRLNQEEVESLNRPTGSE IVAIINSLPTKKSPGPDGFTAIFYQRYME ELVPFLLKLFQSIEKEGILPNSFYEASIIIP KLGRDTTKKENFRPISLMNIDAKILNKIL AKRIQQHIKKLIHHDQVGFIPGMQGWFN ICKSINVIQHINRAKDKNHMIISIDAEKAF DKIQQRFMLKTLNKLIGIDGTYFKWKNIP CSWIGRINIVKMAILHKALYRFNAIPIKLP MTFFTELEKTTLKFIWNQKRACIAKSILS QKNKAGGITLPDFKLHYKATVTKTAWG PYDR/DID/SWNQDLMCAVLPSRYVTL QDSSIL*KMR*VKKLQKSLQLADLVQG LRKDVSI
806	8857	A	175	1453	1936	EVEKHLCCQG*ELLRAQHN*AAACRRPRP PAPGPQCSAGGPMARAPAPQVPPPPPCS A/PPPLPLPLPAS/HAHPQPHFRHGRSA LLPRPPWAVRSRGALAGPRTRAAAGLR GGAGAAPAPADARFPASSPAE*PKFPQN SARALTGFPRCTDPTVSSPGY

807	8858	A	1750	1	1401	MSEL PFTIASKRIKYLGIQLTRDVKD LFK ENYKPLLKEIKEDTNKWKNI PCSWVGRI NIVKMAIMPKVIYRFNAIPIKLPMFFTEL EKTTLKFIWNQKRARIAKAILSQKNKAG GITLPDFKLYYKATVTKTAWYQNRD IDQWNRTEPSKITPHIYNLYIFDRPEKNK QWKGDSL FNKWCWENWLAICRKLKLD PFLTPYTKINSRWIKDLNVRSKTIKTEE NLGNTIQDTGMGKDFMSKTPTAMATKD KIDKWDLIKLSFCTAKETTIRVNRQPTK WEKIFATYSSDKGLISRIYNELQQIYKKK TNNPIKKWARDMNRHFSKEDIYAAKKH MKKCSLSLAIREMQIKTTMRYHLTPVRM AIKKSGNNRCWRGCGEIGTLLHCCWDC KLVQPLWKS VWRFLRDLEIFDPAIPL LGVYPKDYKSCCYKDTCT/R/MFIVALFT IAKTWNQPKCPTMIDWI
808	8859	A	1751	1	1410	
809	8860	A	1752	1	1559	MDTFLD TYTL PRLNQEEVESLNR PITGSE IVAIINSLPTKKS PGPDGFTA EFYQRYKEE LVPFLLKLFQSIEKEGILPNSFYEASHILIP KPGRD TTKKENFRPISLMNIDAKILNKIL ANQIQQH IKKLIHHDQVGFIPGMQGWFN IRKSINVIQHINRAKDKNHMIISIDAEKAF DKIQQRFMLKTLIKLGIDGTYFKIIRAIYD KPTANIILNGQKLEAFPLKTGTRQGCPLS PLLFNIVLEV LARAI RQEKEIKGIQLGKEE VKLSLFADNMIVYLENPIVSAQNLLKLIS NFSKVSGYKINVQKSQAFLYTNNRQTES QIMSEL PFTIASKRIKYLGIQLTRDVKD LFK TSVISQVWVGSLDTSILQLWVGSLDISV ILQLWVGSLDTSVISQLWVRSLDTSVISQ LWDIAFLSHVPGMLS*KSQVSLATLMQR MSSHGLGQLQPCGSAGYSSHGCFHRLAL NACGSSSAQCKLLVDLPFWGLDGGLLLT AARGHSPGALCVRVPTPHFPSMLP
810	8861	A	1753	1	1575	MNTDAKILNKILANRIQQHIKLIHHDQV GFIPGMQGWFNIRKSINVIQHINRTKDKN HMIVSTDAEKTFDKIQQPFMLKTLNKLGI DGTYLK IIRAIYDKPTANIILNGQKLEAFP LKTGTRQGCPLSPLHKFLD TYTL PRLNQ EEVESLSSPITGSEIVAISS/FTNEKESRTR WIHSRILPEV*GGT/RIKYLGIQLTRDVKD LFKESYKPLLKEIKEDTNKWKNI PC*WV GRINIVKMAILP/KELEKTTLKFIWNQKR ACIAKSILIQSKAGGITLPDFKLYYKAT VTKTAWYQNRDIDQWNSTEPSEIMP HIYNLYIFDKPEKNKQWKGDSL FNKWC WENWLAICRKLKLD PFLTPYTKISSRWIK DLNVRPKTIKTEENLGNTIQDIGMGKDF MSKTPKAMATKANIDKWDPIKLKSFCT AKETTIRVNRQPTKWEKIFATYSSDKGLI SRIYNELKQIYKKKTNNPIKKWAKDMN RHSSKEDIYAAKKHMKKCSSLSLAIREMQ IKTTMRYHLTPV
811	8862	A	1754	468	4080	RVRSGTDSIASGPRVLCSTRTERRRRRSY LVHRRVCVPCGPAVDGVFNLTNIDRWFL HINRAKDKNHMIISIDAEKAFDKIQPFM LKTNLKLGIDGTYFRIIRAIYDKPTANIIL NGQKLEAFPLKTGTRQGCPLSPLLFNIVL EVLARAI RQEKEIKGIQLGKEEVKLSLFA DDMIVYLENPIVSAQNLLKLISDFSKVSG YKINVQKSQTFLYTNNRQTESQIMSELPF TIASRRIKYLGIQLTRDVKD LFK

812	8863	A	1755	1	2882	MDKFLDITYTLPRLNQEEVESLNRSITGSE IVAIINSLPTKKSPGPDGFTAIFYQRYKEE LVLLLLLKFQSIEKEATLPNSFYEAHILIP KPGRDITTKENFRPISLMNIDAKILSKIL ANQIQQHKKFVHHDEVGFIPRMQGWFN IHKSKNVIQYINRTKDKNYMIISIDAEKA FDKIQQLFMLKTL SKLGIDGTLYLKIRAIY DKPTVKIILNGQKLEEFPLKTGTGQCPL SPLLFNIVLEVLARAIQEK
813	8864	A	1756	1	1746	MIISVDAEKAFDKIQPFMLKTLNKLKID GMYFKIIRAIYDKPTANIILNGQKLEAFPL KTGTGQCPLSPLLFNIVLEVLARAIQEK KEIKGIHLGKEIKLSLFADDMIVYLENPI VSAQNLLKLISNFSKVSGYKINAQKSQA FLYTNNRQTESQIMSELPFTIASKRIKYL GIQLTRDVKDLFKENYNPLLNEIKEDTN KWKNIPCSWVGRINIVKMAILPKNWKK TTLKFIWNQKRACIAKSILSQKNKAGGIT LPDFKLYYKATVKTAWYWYQNRDIDQ WNRTEPSEIMPIYNYLIFDKPEKNKQW GKDSL FNKWCWENWLAICRKLKLDPFLL TPYTKINSRWIKDLNVRPKTIKTLEENLG ITIQDIGLGKDFMSKTPKAMATKAKIDK WDLIKLSFCAEKETTIRVNRQPTKWEKI FATYSSDKGLISRIYNELKQIYKKKTNNPI KKWVKDMNRHFSKEDIYAAKKHMKKC SSSLAIREMQIKTTMYHFTPVMAIHKK SGNNRDMDEIGNHHSQQTIAMTKNQTP HVLTHR WELNNENTWTQEGEHTLGPV VGNLKLRLPKISLS
814	8865	A	1757	1	2866	
815	8866	A	1758	1	1285	MLEVLAWAVRQEKEIKGIQLGKEEVKLS LFADNMTVYLENPIVSAQNLLKLISNFSK VSGYKVSGQKSQALLYTNNRQTESQIMS ELPFTIASKRIKYLGIHLTRDVKDLFKEN YKPLLKEIKKDTNKWKNIPCSWVGRINI VKMAILPKDIIQENFPNLARQANIQIEIR KTPQRYSSRRATPRHIVRFTKVEMKEK MLRAAREKASHHTYSKIDPILGSKPLLSK CKRTEIITNYLSDHSAIKLEFRIKNL
816	8867	A	1759	2	231	PPSAS/CVQTGPCHSLAAPPAPGQE GHQLPSHVIPCHLALGTAPPQPAAMAG WGVSQATYCQELEPPFPVSSS
817	8868	A	176	5	711	FEALRMIGHLFAKSPYHGKINSKIVART NIKLMVKVVMWKNGEIIDTLQIVYGDN APKKSVAVYKCTSLRSKVLDEACSSR PVTICKGKINLVYANISIGSAYTILM/EK LNLSKLSLTHWMPQ/PVHPDQLKTRAKLS ME/ILNKWDQDPKGFL*KIVTRDRTWLY *YTFEDKAQSKQWLPRGGSGPVKAKAG WSRAKVA/TTGFWNAQIVLLVDFLEGQ RTITSAYESILLKKK
818	8869	A	1760	1842	2096	CHSQKPQVPPPKPWGSLERP*PNT*VPAC VLPAPAPARPGQIARQ*PWVAPGTSGQ SRVGRTPGVSSGHGQTLTCPMALLQPLL
819	8870	A	1761	37	288	WGNTGSQVMTTVLNTALLPPKPSMPLPI KHYAIPPPSY/SPHP*PIPSPTANLESAPP ASAP/PPPLPPAQLGEAHAPPE*YAIPPP SYSHTRSHPSPAQQQTLQRHQPLHLSSS ASTLPSWGKLMHHLNNIPQ
820	8871	A	1762	397	506	SFLEDLTGLSNQPATAGANWITRLCTGS P*NV*PPWHMSSGHPEAVSRVCIFNLVG FGI
821	8872	C	1763	291	491	MGADRQTHPQDRWFSHLIKLLRRSYRI EQPASHSRGRLDNTSLHRLSLCPCHPLF LTLFLGIMF*

822	8873	A	1764	630	1159	SFYSALMLSDRKNRGRERHGLSRRIKR QRKLVEAEAASQACLAGKPGPTPASHP/ PGDGLPCPLSAPTLSPAT/ALPLP/SP*RSP NHSAN/PNPLSPTSSVKHSRCSSPHSALPL STPKATPPSPNHRAGLFSSLPAPMSTS*L LQKNCVLVRAPAPTSYIPVFFMTPAQCP VFLSAQ
823	8874	B	1765	1	1359	MGIKNSKRGSPLAAPALLKPDTLWSCIF GEGDLGEEDMPPDPQAPSPAILPPNHAF GLWPFRTYQTHPQEEAADPAAAYHPEP PPLILAGVRFRSNPALPENGKGAWRGDG VAEGHAALWVLGLRCERSVTAALAART REHDGRWREGAEKGPRRRWVVRAIQTP RLGKALIHCVTTRGSLWVNSSVSAGSER DQRADHAAAQTSACAGAVACGLLLLLLV RGQAWVKQNLSPETRTKELVSLMPL PHPGQGHNLASRAKARTQVPVSGPTHGA GAGESCPCEGRQAGVQTFGLGIPFAKPPL VRCDLHPLSPLNLGVVWGWVNHPSGHIY TPAHSHEGSNLPHWRQARNRQLGYLDQ VAALRWVQQNIPTLEATLTVSPFLASLR WHECVFACCVPHIPRTTFHGAIMESGVAL LPGLLPAQLMSSPRFPGPCVFYEFQHQS WLKNIRPRT*
824	8875	A	1766	2	597	RWLIPKVMRIYDTQKKMDREASQAALQ KMLTLLMLPPTFGDLLREEYIGDNGDPQ TLQAQFQEMMADSMFVIPALQVAHFQC SRAPVYFYEFQHQS WLKNIRPPHMKAD HVKFTEEEELSRKMMKYWANFARNG NPNGEGLPHWPLFDQEEQYLQNLQPA VGRALKAHRLQLWKKALPQKIQELEEP EERHTEL
825	8876	A	1767	3	1867	IHPSAPRLGKALIHCCSFPGQPLGEQQRV RRQRTETSEPTMRLHRLRARLSAGACGL LLLLVRGQGQDSASPIRTTHTGQVLGSL VHVKGANAGVQTFGLGIPFAKPPLAGPLAR FAPP*SPLESWSGVRDGTTHPAMCLQDL TAVESEFLSQFNMTFSDSMSCLYLSI YTPAHSHEGSNLPVMVWIHGGALVFGM ASLYDGSMALVALENVVVVHQLPPGGV LGFFSTGDKHATGNWGYLDQVAALRW VQQNIAHFGGNPDRTVIFGESAGGTSVSS LVVSPISQGLFHGAIMESGVAL/LLPGLIA SSADVISTVVANLSACDQVDSEALVGCL RGKSKEEILCN*TSLFKMIPGVGGMGVF LAQGTPRELLASADFQVPVSIQVNNNE FGWLIPKVEDLIDNPEGKLGQERASQGA VLQKMLTLLMLPPTFGDLLREVYIGDNG DPQTLPKRKFKQMMADSMFVIPALQV AHFQCSRAPVYLTSSQHQS WLKNIR PPHMKADHGDLPFVFRSFFGGNYIKF TEEEELSRKMMKYWANFARNGNPNG EGLPHWPLFDQGGAITLQNLQPAVGP GL*KAHRLQFWKIKALPQKIQELEEPEE RHTEL
826	8877	A	1768	2	288	CPNSSPGSASEVGCARSGQSSLLRSLPRC DGWPWAEAGAMCAGRNLTSQSVGRY/ YSSR*QDEES*TARHLLCAPQTGHQRRR PCRGQRNFCHIPC
827	8878	A	1769	1017	1463	PRGPWSQGEPKWLLARQAAGCCPPGAC LWGHSPAGACSPCAAKGSRYSRVPASS GTPAGK\GWQLLAREGEQEAGLCIEASQI GVPNSSPRKRPQR*DVPDRGSPVC*EVFP RCDGWPWAEAGASVQGGTSPVVSFNRM TSASTPNIW
828	8879	A	177	1	152	PGAMAVLLETTLSDVVIDLYTEERPRGE A*APLTCCRGPRACLPTFPSLR

829	8880	A	1770	1	1181	MAAYKLVLIQHGESMWNPNENRFSSWYN TDLSPAGHKEAKCGRQHSGGLIGLNKAE TAAKHGEAQVKIWRHSYDVPPPLMEPD HPFYNISKDRRFANLTEDQLPSCESLKDT IAKALPFWNEEIVPQIKEGKQKYPFEKR LEVVNHYFTTDDGYRIISARFGVPRTQV RTWVALYEKHGEKGLIPKPGVSADPEL RIKVVKAIEQHMSLNQAAAHFMLAGS GSVARWLKVYEERGEAGLRALKIGTKR NIAISVDPEKAASALELSKDRRIEDLERQ VRFLETRLMYLKKLKALAHPTKKAIEIP RSTFYHHLKALSKPKDYADVKKRISEIY HENRGRYGYRRVTLHLHREGKQINHKA VQRLMGTLSLKAAIKVKRYRSYRGEVG QTAPNVLQRDFKATRPNEKWVTDVTEF AVNGRKLYLSPVIDLFNNEVISYSLSERP VMNMVENMLDQAFKKLNPHEHPVLHS DQGWQYRMRRYQNLKEHGKQSMSRK GNCLDNAVVECFGTCLKSECFYLDEFNSI SELKDAVTEYIEYYNSRRISLKLKDLIAS CLTVQLFGVSTLEGLSEEAIMELNLPTGI PVVYELDKNLKPIQFLGDEETMRKAME AVAAQVEDEYNLYGDVTTVSSLTPEKL APEVKENVPERLNILLQVGGRSRTNLNR VRVPIHKHPSIRDPNSSQASLNKLTDKMD SLWLKSKNRPKGPWKGEHAVKLFVSLE NAAKPVFLQPSQRRVPGNNGSWEFPS*S RKSGISIGAVKRPTH*GS*KASSIS*NAAY VSKKAESLSSSHEKGCSDTAQYVLLSSK GSQQA*QVCGR*KAY**DLSRE*RPPIRIP* GNAVSSSRRETDP*SCSAPDGNPLT*SS D*GQAIPLLQRRGRANRP
830	8881	A	1771	362	551	DRLDPHSAAH*GAKSSPLAATSDQWHL ALSRGSGSLYKCTEVKQMSNS*PASRSA CPPSPPR
831	8882	A	1772	2318	3200	FMPLHLDGGYCSPAEGFSSRYEHGLMK DLRGSLSPPGERACEGVPSAPQNPPQR KKVSLLEYRKRKQEAKEASAGGGGDSA QSKSKSAGAGQGSSNSVSDTGAHGVQG SSARTPSSPHITKFFPSHSSMSHLEAVSPS DSRGTSSSHCRPQENISSRWMGSHISRTT P/SKEGASPRSSEAA*G/SAQKGEPSPTWE SNITEKSDPADGEGPETLSSALS*RSNSF TALSRYSYQT/PLAPFTGTPGYFSSQPHS GNSTGNSLPRRSCPSSAASPTLQGPSDSP TSDSVSQSSTGTL
832	8883	A	1773	53	1025	GTRHLEAVSPSDSRGTFLSHCRPQENISS RWMVPTSVRLREGGSIPKVLRSVRVA QKGEPSPTWESNITEKSDPADGEGPETL SSALSKGATVYSPSRISATSSCSVIVLGQN HKASFSRVPPSEDIPQSPGYSYRTTAL RPGNPPSHGSSSESLSSTSYSSPAHPVSTD SLAPFTGTPGYFSSQPHSGNSTGNSLPRR SCPSSAASPTLQGPSDSPTSVFSFSVPAQE L*ASTS/SSSEI/PRSSLAIRLTD*SVCVPLG QSAGYQGLQGICGFQFTALPHTVGVGFS TQYRIPSPLOGSRSDSRRGLFLGLLGF GKQN
833	8884	A	1774	1	414	AENTILSLMFSGKSWGSLSSECGALLPGT PTATRLQSLTRSSLKRGTP*GPQIPAARP REGSRIGTCTSS*PGLRTEAHRSLRNRQA GVSSPFQLSPALKPRKSPSQATGQRP*G QWGQKSGSALLPTNTTHVEA
834	8885	A	1775	1	458	ENTILSLMFSGKSWGSLSSECGALLPGTP TATRLQSLTRSSLKRGTP*GPQIPAARPR EGSRISQNQVGDGGKENRYRGFGPPGT KSDPGHQHG*GGGLWGSWRKSGPAI ATGAIASPATQLLRVNPDTGDWDVYFLL TLVSGRLTGA

835	8886	A	1776	1	1387	HSMGWKEHVDRGGHTKGMVFSVLQPA CWLPRERPFQLRLCLIEDPLLRCLGQGR GRGQETTSGLILLSHVGTFLRDRWLTSL WPCPRALLVFLSHSCEVMGAGAPGVSLP EGQLSPLPWLVQGRSSRRAPDSGQGPLG PPGLADVSMRGRAPGTSMCGS/RSTPVPP QSPGG*VSMPATPGIGFLCRLPHKSAPEG P/GGFGFLFFIKHLKQHCSLPSRGLSITA STCVVLVGSKADDPFCPHCPHPGLTSS LRGAFSR/PSEQGRAGRGLESSLVSQSG SCEASVLRPESRGSTHP/ISPVSGFTLRW VAGEAIAPVAIAGPAGAGLRIGLRGALRP AHGHPRL*SPGNPISPSSTSPCLMPQGH CLPAGPPNPRCLSSFPSPTLVLTNPASLS GPGCRDLGSLKSLKNFCGSDSEAELL VGVPGRAPHSLLKLPQLFPENIKLRIVFS AKKKKK
836	8887	A	1777	46	591	LSPPKPQKQSQEQNPFCQRWALGKQLGP PQGGQEG/QGPPDSLVLPGV/PPVPLFVG GNLPHPPPP/PQPORNKGRQTEGSCSPF KGQHNS/PCGPQPS*AHPLRHGSGDQAAQ PTSAP/PPCR/PES*QADEMPTPCCHNTG KALAGPPSQEGMEPGGPQGPSRSTQSSV AHLTSGTAVRPGLGSP
837	8888	A	1778	1412	1673	KRCPINRFPLECLPLPHLMGIPPEGHFH PLMGE**NPPCSIQDPHCVTYFETPPVNL CPSTRPPEVGWEGGPSSPPAFEAPGLKG
838	8889	A	1779	646	1098	MVELLVTFPFSQLQLYFQLTYSFTELL KVPLMVLFGMPMKHFLKPTVSDQW ENNRKLKRRISR*FSCRKV*V*IAHCHKF CLVLEA/HMHWLILCAKKRF/PPLKKLT WLGMSHTCNPSTLGG*GR*TA*TQEFK TSLDNMVKPHLF
839	8890	A	178	1112	2085	RHSHAVQKKPLSGGGAGAMAVILETTL GDVVIDLYTEERP/RCQLYGDQASFFAE KVPRIKHKKKGTVSMVNNGSDQHGSQF LITTGENLDYLDGVHTVFGEVTEGMDIK KINETFVDKDFVPYQDIRINHVTILDDPF DDPPDLLIPDRSPEPTREQLDSGRIGADE EIDDFKGRSAEEVEEIKAEKEAKTQAILL EMVGDLPDADIKPPENVLFVCKLNPVTT DEDLEIIFSRFGPIRSCEVIRDWKTGESLC YAFIEFEKGGGAYGKTPATRPFGSWPF AGLLLTCSFLRYPLILWITVLPPLSELPL AAAERPSAASQ
840	8891	A	1780	109	943	WAKLGKGPAPK*PQALGASAPSALYPR HVAPARAPGRTKGAGSSCRNSPRQVAP QPWQWGGGAQSDVSP*GQTPRGGSFER SSSCSGHTGLVGKERRPLSLEGP*/SPEDP PRARHGGPQGCHEPPWFSRPLCPEAGP EPRAPAWTSDSIGERSTGG/PSRPASKGP VPSAQRAGQTPGNPEAAGSLSLPCRALP QGREAPQPQPPYLPKLERGILVFALSK IFKN
841	8892	B	1781	98	195	GLCLGQEVGQEDLVMQTLPGVGLDR DEEVTG*
842	8893	A	1782	2	1556	

843	8894	A	1783	2	1928	ARGAPRLRAAGAPSSSARVSLVSPSSPA MAALTRDPQFQKLQQWYREHRSELNLR RLFDANKDRFNHFSLTNTNHGHILVDY SKN/LLVTEDVMRMLVGLWPKSRGVEA ARERMFNGEIKINYTEGRAVLHVALRE TGFKTHPILG*NGKDVMPENVKVLDKM KSFACQVRSGNLKGYTGQRPFTDIVINI WIGGSDLGPLMVTEALKPYSSGGPRVW YVSNIDGTHIAK\TLAQL\NPESLFIASK TFTTQETITNAETAKEWFLQAADPSIA VGEDFLFALSTNTTKVKEFGIDPQNMFE FWDWVGGRYSLWSAIGLTSIALHVGF NFEQLASLAHWMDQLFRTDAPGRKNAP VLLALLGIWYINCFGCETHAMLPYDQYL HALLRTSSRA\TWSPMGNTSPNLEPVWT TRQAPLCGGS\QGPMAFMLTSCIHQGT KMIPCDFLIPVQTQHPKGLHKKILLAA NFLAQDRGP**GGKSTEEGPKGASRVAG KSPEDFERLLPHKGL*KGNRPNTNFYVFT K\VTPIQLGAWSPMYEHKILRFRVWIWDI NSF*PSGELELGK\QPLRKLPELDGSA QVTFQDVSTNGLNFIKAAARGPRVPINS VLICSLLCDSHFFSSLSFSPKPELIVP
844	8895	C	1784	127	435	MAASXNPEVLDITEETLHSRFLGVRNV ASVCLQIGYPTXASVPHSIINGYKRVLAL SVETDYTFPLAEKVKAFLADPSAFVAAA XLGCCHHSCSXCCCSPS*
845	8896	A	1785	112	1161	RTAVMPREDRATWKSNYFLKIIQLDDY PKCFIVGADNVGSKQMQRMSLRGKA VVLGMKNTMHAQAPFEGTL*NNPSLWR KLLPHIRGEFGLLFHPGRTLTEIRDMLL AQ*GCPAAARPGAICPHVKVTVASPRTL GLGPEKTSFFPGL*VSPTKNLQGAPIENP EVNVPASRTGDQSGEPSESHGWLNMLA NISPFFLWGWVIPARCSTNGQHSTKPLK VLGLFTGGKLLQFSAFLGGVSRKCLPSV CLPELAYPNCCNQYPSIINGYKRVLAL SCGDGITPFPLAEKVKAFLADPSAFVCC CNLWVAATTACFA/AAAAAPAKVEAKE ESEESDEDMGFGFLD
846	8897	A	1786	2	355	RSITCKTKEARMLLAWVQAFVSNMMLL AEAYGSGGCFWDNGHLYREDQTSAPAG LRICLNWLDAQSGLASAPVSGAGNHSYC RNPDEDPRGPWCYVSGEAGVPEKRPCE DLRCPGGRI
847	8898	A	1787	1	771	MLLAWVQAFVSNMMLLAEAYGSGGCF WDNGHLYREDQTSAPAGLRCLNWLDAQ SGLASAPVGYCRNPDEDPRGPWCYVSG E/AGVPEKRPCEDLRCPETTSQALPAFTT EIQEASEGPGADEVQVFAPANALPARSE AAAVQPVIGISQVRMNSKEKKDLGTLG YVLGITMMVIIIAGAGIILGYSYKRGKDL KEQHDQKVCEREMQRITLPLSAFTNPTC EIVDEKTVVVHTSQTPVDPQEGTTPLMG QAGTPGA
848	8899	A	1788	48	375	KGLIKPFGHRTPERKK*LAQGRKQATGM ARAQLPDGAQHFSALC*QLSRASNL*C HTQEALAAPSHKASFSEPFHLPMGRRVN GAFYGAIWFGDLNLKWSGCGNDAG
849	8900	A	1789	6	902	LQGWDEAEPPRGPRLNTGRSITCKTK EARMMLAWVQAFVSNMMLLAEAYGSG GCFWDNGHLYREDQTSAPAGLRCLNWL DA\QAGLASAPVSGAGNHSYCRNPDED RGPWCYVSGEGGVPEKRPCEDLRCP TTASKALPAFTTEIQGNVLKGPSADEVQ VFAPANALPARSEAAAVQPVIGISQVR MNSKEKKDLGTLGYVLGITMMVIIIAG DGIIILGYSYKRGKDLKEQHDQKVCERE MQRITLP*SAFTSPTCEIVNEKTVVVHTS

						QTPVDPQEGSTPLMGQAGTPGA
850	8901	A	179	3	492	GGGAGAMAVLLETTLFYVAIFLYTEKR PRACGNFLKLCRIKYNYCLIHNVQRDFI IQTVDTTGTGRG*ESIFGQLYGDQASFFE AEKVPRIKHKKKGTVMVNNGSDQHGS QFLITTGENLDYLDGVHTVFGEVTEGMD IKNINETFVDKDFVPYQDIRIN
851	8902	A	1790	1	1995	LGRPTRPAPTFWAVAVRTRCLAERREQE LMGALCYPPQGDRFLQSWIFFRPVMA DKLTRIAIGNHDKCKPKRRQECKKSCP VVRMGKLCIEVTPQSKIAWISETLCIGCG ICIKKCPFGALSIVNLPSNLEKETTHRYC ANAFKLHRLPIPRPGEVLGLVGTNGIGKS TALKILAGKQKPNLGKYDDPPDWQEILT YFRGSELQNYFTKILEDDLEAIKPQYVD QIPKAAKGTVGSIIDRKDETKTQAIVCQ QLDLTHLKERNVEDLSGGELQRFACAV VCIQKADIFMFDEPSSYLDVKQRLKAAIT IRSLINPDRIIVVEHDLVLDYLSDFICC LYGVPSAYGVVTMPFSVREGINIFLDGY VPTENLRFRDASLVFKVAETANEEVK KMCMYKYPGMKKKMGFEIIVAGEF TDSEIMVMMLGENGMGKTTFIRMLAIGS LKPDEGGEVPLVNSYKPKISPKSTGS VRQLLHEKIRDAYTHPQFVTRL**KPLQI ENIIDQEVQTLGGELQRTVLAL*LGQN LPDVYLDPEPPAIVLDSIEQRLMAARVV KRFIPHAKKTAIVVGTWTFIMATYLAAD RVIVFDIGVPSTKNTVANSPQTLGWA*1 NFWSSAWKFTFQEELQNTYWPINKLI SLEDVDQKKSGNYFFLDD
852	8903	A	1796	1217	2829	GARSEAAEFQQSASCRRLRGGGGPGTPG RGGALLASLLPPCRTPPDPDGGSCRCTR LLSPLGKLSAPPRPRPLFVVAQAGHAPQ GLLPTSRPAAPATAGSRNMSTLLSAFY DVFLLCKTEKSLANLNLNMLDKKAVG TP/VAAAPSSGFAPGFLRRHSASNLHALA HPAPSPGSCSPKFGAANGSSCSAAAG GAVGGRRTALLNKENKFRDRSFSENGD RSQHLLHLQQQQKGGGGSQINSTRYKTE LCRPFEESGTCKYGEKCFAGHFHELRS LTRHPKYKTEL CRTFTHTIGFCPYGPRCHF IHNADERRPAPSGG/ASGDL/RPTSRTPPP PSCSSASSCSSASSCSSASAASTPSGAPT CCASAPAAAAAALLYGTGGAEDLLAPG APCAACSSASCANNAFAFGPELSSLITPL AIQTHNFAAVAAAAYYRSQQQQQQQGL APPRAP/APPSATLPAGAAAPPSPFSFQL PRRLSDSPVFDAPPSPDLSDRDSYLSG SLSSGSLSGSESPSLDPGRRLPIFSRLSISD D

853	8904	A	1797	731	2553	GARSEAAEFQQSASCRRLRGGGGPGTPG RGGALLASLLPPCRTPDPDPDGSCRCRTP LLSPLGKLSDPSPRPSVIRGGSSPATPPQG LLPTSRPAAPATAGSRNMWTTLVSAFYD VDFLCKTEKYLNLNMLDKKAVG TPVAAAPSSGFAPGFLRRHSANLHAL AHPAPSPGSCSPKFGAANGSSCGSAAA GGPTSYGTLKEPSGGGGTALLNKENKFR DRSFSENGDRSQHLLHLQQQKGGGGS PDQIPTRYKTELCPFEERARAQYGEK CQFAHGFHELRLTRVHPEVQDRSCAAP FHTIGFCPYGPRCHFIHNADERRPAPSGG ASGDLRAFGRDALHLGFPREPRPKLHH SLSFSGFP SGHHQPPGGLESPLLLDSPTS RTPPPSCSSASSCSSASSCSASAASTP SGAPTCCASAAAALRLLYGTGGAI*DLL APGAPCAACSSASCANNAFAFGPELSSI TPLAIQTHNFAAVAAAAAYRSQQQQQQ QQQGLAPPAQPPA*PPSATLPAGAAVAPP SP*PFSFQLPRRLSDSPVFDAPPSPDLSLSD RDSYLSGSLSSGSLSGSES*PSFDPGRRLP IFSRLSISDD
854	8905	A	1798	146	403	RKLDVYFEYEEKIMSKTTLDKSLLDIISD PDAGTPEDKMRFVLIYYISTQQAPSEAF TKMASAPASYGSTTTKPMGLLSRVMT G
855	8906	C	1799	47	235	MXVXCNQIKXLVSYRAINRPDITDTEME TVMDTIVDSLFCFFVTLGAVPIIRCSRGN SSKKW*
856	8907	A	18	246	730	SSIMTFLESSAVPPHWTGQDGRVCWTG WIPQCQAGSAPE/RS*VFINSAGQKSADT GWSSSKPQN*QLSSTGAALPLASLSRER AWVDDGKHRLTTPMTVPQRAVQQL*E TSG**DWRQKVQIFQQA*VVGMIQPSHSQ FLQREDVIMLRPFGLHLSWEENG
857	8908	A	180	1	451	MGFRHVGOAGLELLTSGDLPASAYQSA GITDVSHCAQPASPLSYFLQALKHEFVV RHLTPGHLDTPDTKKPGHPDTQTLD QTPSHLTSRHPDTQTADTQTPDTQNLTP GPPDT*HPDTWHLTPDTQTPGHPTLRHP DTQIPRHPET
858	8909	A	1800	48	2100	PAPGLPVLPRVEVFLEPGSGSWEPRWR RRRQRQQQ\QPSFRKDSQLLSCVYCLS MCLILKTAQEHYPGRYSLMHRFGQDIFS PLLSVREL RDMGITLHLLHSDRDPIDV PAVYFVMPTENIDRMCDLRNQLYES YYLNFISAISRKLEDIANASVRGLSAVT QVAKVWDQYLNFTLEDDMFVLCNQN KELVSYRAINRPDITDTEMETVMDTIVDS LFCFFVTLGAVPIIRCSRGTAAEMVAVKL DKKLLLENLARDARNSLFYRVDTLGAGHF SFQRPLLVLVDRNIDLATPLHHTWTY*A LVHDVLDLHNRVNLEESSGVENSPAGA RPKRKNKKS*YDLTPVDKFWQKHKGSPF PEVAESVQQELAESYRAQEDVKRLKSI MGLEGEDEGAISMAF/SDNTAKLTS*VS SLPELLEKKRLIDLHTNVATAVLEHIKAR KLDVYFEYEEKIMSKTTLDKSLLDIISDP DAGTPEDKMRLFLIYYISTQQARS*EADL QQYKKALTDAGCNLNR*SR*YIKQ*RAFT KMASA*AGYGSTTTKT*MGLLSRV*LN GSQFVMEGVKNLVLKQQLPVT*RLD NLMEK*KS*NPRLMDYRYFDPKNACGG NDSSV*PQKLKIPFRGHSFFVGGEENYI EYQNLCDYIKGKGKHILYGCSELFN ATQFIKQLSQLGQK
859	8910	A	1801	1	394	

860	8911	A	1802	3	536	RIYIFRV/PMASCD/FSIRT/YTNADTPDDF QLHNFSLPEEDTKLKIPLIHRALQLAQR VSLASPWTSPTWLKTNGAVNGKGS LKGQPGDIYHQTWARYFVKFLDAYAEHKL QFWAVTAENEPSAGLLSGYPFQCLGFTP EHQGGSLKAAAGVPRHPDDSYGTSQEK WQLLEKMFEPKK
861	8912	A	1803	192	2035	GRYLHPCFCLVDPLSFRDSGTPVVFSSSN DPEGMEFSSPSRECPKPLSRVSIMAGSL TGLLLLQAVSWASGARPCPKSFGYSSV VCVCNATYCDSDPPTFPALGTFSTRYGE /STRSGRTGWSLSMGPIQANHTGTGLLL TLQPEQKFQKVKGFGGAMTDAAALNIL ALSPPAQNLLLSYFSEEGIGYNIRVPM ASCDFSIRTYTYADTPDDFQLHNFSLPEE DTKLQDTPGFHRAQLAQRPVSLASPW TSPTWLKTNGAVNGKGSLLKGQPGDIYH QTWARYFVKFLDAYAEHKLQFWAATA KNEPSAGLLSGYPFQCLGFTPEHQDFIA RDLSPTLANSTHHNVRLMLDDQRLLLP HWAKVVLTDPEAAKYVHGIAVHWYLD FLAPAKATLGETHRLFPNTMLFASEACV GSKFWEQSVRLGSWDRGMQYSHSIHQ QTSWYHVVGWGTAGNLALNPEGIGPNW VRNFVDSPIIVDITKDTFYKQPMFYHLGH FKQSSIPEGISQVRGLVAISQKNDLDAVA LMHPDGSAAVVVVLNRSSKDVP LTIKDP AVGFLETISPGYSIHTYLWRRQLDGADYS RRHWGSAGAFKGTESAHTLSVTKEGTA GPV
862	8913	A	1804	113	1799	PSAYSYGRYLHPCFCLVDPLSFRDSGTPV LFSSSSDPEVMEFSSPSRECPKPSGRVSI MAGSLTGLLLLQAVSWASGG/RPCPKSF /SYSSVVCVCNATYCDPPTFPALGAFS RYKSRSSGHWMELSTG/PIQANCTGTGL LLILQPEFQKVKGFGGAVTDAGALNILA LSPPAQNLLLKWYFSEEGIGYNIIWVPM AS*DFSIRTYTYADTPDDFQLHNFSLPEE DTKLKIPLIHRALQLAQRPVSLASPWT SPTRLKTRGAGNGKGPLKGQPRDIYHQT WARYIVKFLDAYAEHKLQFWAVTAENE PSAGLLSGYPFQCLGFTPEHQDFIARDL GPTLANGTHHNVRLMLDDQRLLLPHW AKVVLTDPEAAKYVHGIAVHWYLDFLA PAKATLRETHHLFPNTMLFASEACVGSK FWEQSVRLGSWDRGMQYSQSIKKLPV PMWVGWEPNW/ITPSL*NITQATRFNKQ PMFLPPLANFSKFIPEGSQVRGLVAISQ KNDLDAVALMHPDGSPPVVVVLNRSSK DVPLTIKDPAVGFLETISPGYSIHTYLWR RQ
863	8914	A	1805	22	424	ALGMAHITLFFFLLFCDSLALSPRLQC SGTISAHCNLVPPGFKQFSCSLLSGWDY RCMPPC/RWLTFFVFLVETGFHHVQAGL ELLTSGDPPALA/FPKC*DYRRDPRAWA LFVFLT*FFSKLKYHKAKEKWS
864	8915	A	1806	14	253	LIPCGQLFNCLSL*PGFWAMVKFAWVQ YVRSCLSGCLKESRSCSESGDHHPL SSTSLPLSLFMLCKEVLELSGR
865	8916	A	1807	318	455	
866	8917	A	1808	1960	2150	CFVTSNLKCSK*GRAWWFIPVISTLWEA KVGGSLPRSLRLQCAMIAPLYCSLGDR VRPYLLK

867	8918	A	1809	2	1345	GVPVPGLLAGEGVCQLLRHSSPGRCLLK SRARGSVIMSRYGGRYGGETKVYVGNLG TGAGKGELERAFSYYGPLRTVWIARNPP GFAFVEFEDPRDAEDALRGLDGKVICGS RVRVELSTGMPRRSRFDRPPARRPFDPN DRCYECGEKGHYAYDCHRYSRRRRSRA ENLRR*SP*Q*IWLTIGAPLRFKRNRTRLT TFPTRKIFLRQSSLTWLIWLSV*SSLD*RK HLDAAIGYRYF*IV*Y*TMGQRGSTCKL ARFMLNTHYSVLYYVMLSCNSAFNKSF FR**KKKYSTTNRPVYFQMRH*I*IVLR FDFSRTQTILKNELSDILFFL*LEK*VRS RSHSRSRGRRYSRSRSRGRRSRASPR RSRSISLRRSRASLRRSRSGSIKGSRYFQ SPSRSRSRSRISPRSSRSKSRSPSKRS RSPSGSPRRSASPERMD
868	8919	A	181	143	647	LRSRCVQIQGSPATEPVSGSHCADTGLVI RGGALSAHAIAPGQRLSHALHTASAYIN SGRMWDTVHLPQKRCVRPRPQGRV RTP RTRATH/NRVVGARRGTPQRYTG/WGRD *EPSLSQLPQNGDLLAARRREHPACSTG CTSGARVRSRVWRAGQALVPGCAGCAY ILH
869	8920	A	1810	1	840	VVPVPGLLAGEGVCQLLRHSSPGRCLLKS RARGSVIMSRYGGRYGGETKVYVGNLGT GAGNGELYRVIR*YGPLRTVWIARNPPG FAFVEFEDPRDAEDAVRGLDGKVICGSR VRIVELSTGMPRRSRFDRPPARRSFDPN GCYECGEKGHYAYDCHRYSRRRRSR FRSHSRSRGRRYSRSRSRGRRSRAS PRRSR/SPISLRRSRASLRRSRSGSIKGS RYFPIPRRRSRSKIPGLFHGPRSSRSKRS PSPKRSRSPSGSPRRSASPERMD
870	8921	A	1811	20	701	DHASGQSTASSGPDVSGQLQPSQPNAD QGKLTMMRIAVICFLLGITCAIPVKQAD SGSSEEKQLYNKYDAVATWLNPDPSQ KQNLLAPQNGCVL*RNQ*L*TRITLPSKS NESHDMDDMDDEGDHVDSDQDSI DSWDSDDVDDTDDSHQSDSHHSDES DELVTGFSTDLPAVEFTPVPVPTVDTYD GRGDSVVYGLRSKSKKFRRPDIKYPDA TDEDI
871	8922	A	1812	121	1206	LIAGSTHACAHASGRAQHRRDQTRLKAS CSLLSQPTKENSPLRELPLICFLLGITC AIPVKQADSGSSEEKQLYNKYDAVAT WLNPDPSQKQNLLAPQITLPSKSMESH HMDDMDDEDDDHVGTARDSIDSND SDDVDDTDVDSHQS*WSLHHS*WNLDE LVTGFFPTGPCPNRSFIPVCSPTVDTY DGRGDVSVYGLRSKSKKFRRPDIQYP ATDEDITSHMESEELNGAYKAIPVAQDL NAPSDWANRGKDSYGTSKLD*QSAETH RVHQQSRLYKRKANDESNEHSDCDW*A RTFPKVSREVFHSHEFSSVHGDFACL*PPK SKEEDNTPLEFRYSPGIRMWHFWGSI
872	8923	A	1813	171	459	
873	8924	A	1814	1	235	
874	8925	A	1815	292	1396	AQATGPYSRICACAKGAMAASCVLLHT GQKMPLIWSWGTWKISEPGQVKAAYK VLPLALGYRHNDGVIYGNLEIGVEAL KGRTVGPGKAGCLRGRKPGFVTSKLWA NTKHHPEGMWSLPLRKDSGLTFQLEYL DLYLMHWPYAFERGDNPFPKKCDWNI WLDSPHYKET*RALKALVAKGLVQA/V WGLSNFNSRQDDILSVASVRPAVLQV ECHIPITGLKMRLIAHCQGTWAWR*TAF NPLGLPLNRAWRDPADEVPAGGNPVVL GIGLKKYGRSPSESCLRWPGPSGKVICI PKSITPFSNPFRTFKVFDFTFSPEEMNQ

						LNALNKNWRYIVPMLTVDGKRVPKD AGHPLYPFNDPY
875	8926	A	1816	133	402	LLTSLVNSRILILFINSKKIFAIIFSTRGGIL RITAVIWNNISVTHGNGDMALAQYSMP VPA*AIARRILVMLYPSRTEAFEKFLIRC
876	8927	A	1817	356	463	
877	8928	A	1818	81	728	TRGPPPAEEMDEDGLPLMGSGIDLTK\VP AIQQKRT\VAFLNQFVVHTVQFLNRFST VCEEKLAD\SLRIQQIETT\NL\DAKLS SIPGLDDVT\AEVSPFKLSPSVTNG\AHP* RPLSE\QPQPEPVPPGLLDLQES*SIQAGN FL*L*PKDPRYARYLKMVQ\VGVPVMA IRNMKISEGLADPDLLERPDAP\VPDGEIS EKTVEESSDESSFS
878	8929	A	1819	1214	1565	LKEITDEM\YRTL\LLSHRIK\MVSP\IFFS TNTVPFFPCYNPFFMNIQEMTKVTASRLF LFFVDLLQGVQPCFLCCCLCSIWFCNEH LDL**ASDFVMCMCVMHYITPIHV*YI HYIYVDTY\MEVCIHLYII*CV
879	8930	C	182	225	335	MLARLGSNSWTSSDPPTSASQTAGITGV SHRAGPLT*
880	8931	A	1820	1	1044	MAEKFDCHYCRDPLQGKKYVQKDGHH CCLKCFDKFCANTCVECCKPIGADSKEV HYKNRF\WHDTCFRCAK\CLHPLANET\FC GQQQDPCNKCTTREDSPKCKGCFKAI VAGDQ\NVEYK\GTV\WHKDCFTCSNCKQ VIGTGSFFPKGEDFYCVTCHETKFAKHC VKCNKAITS\GGITYQDQ\PWADCFVCVT CSKLAGQRFTA\VEDQYYC\VD\CYKNFV AKKCAGCKNPIT\GEKDCVKSEPPSL*S* EAPSV\PRETLASHPV\SQRPQGQASGWR EDLSLVGGGSL*KKSKLSSSSWPGFGKG SSVVA\YEGQSWHDYCFHCKKCSVNLAT KRFVFPQEQVYCPVCAKKL
881	8932	A	1821	235	1119	GPSSYKVG\TMAEKFDCHYCRDPLQGKK YVQKDGHH\CCCLKCFDKFCANTCVECCK PIGADSKEVHYKNRF\WHDTCFRCAK\CL HPLANET\FCG\QGGQ\RS\CATSCT\TREG PPSAKGC\FAI\VA\GDQ\NVEYK\GTV\WH KDCFTCSNCKQVIGTGSFFPKGKDFYC VTCHETKFAKHCVKCNKAIASWGVTY* DEP\WHAEGFVCVTCSKKLAVQHFTTVE DQ*YCVDCYKNFVAKKCAGCKNPITGF GKGSSVVA\YEGQSWHDYCFHCKKCSVN LANKRFV\FHQEQVYCPDCAKKL
882	8933	A	1822	222	622	KCSSKHFTKEDSQITNKHIEKCSS*LLV REM\QIITTKSVSAIHQNG*NENTKQTCQ/ DIDNDMQQWEFMR*EWANW*N*KTNW Q*LLRLDKCVS\YDPAIPFLDISPTERHIY AYHKTCIRMFKATLFIAPNI

883	8934	A	1823	75	1402	VRRRTLSSRRWHRLSHGPRWLQVLTAS PPLQARGAFRSFPHSWGEDFLASLMFKI QLEPLKLRAWTLNGFVKFRNKETSAGPV AVMGKDYYKILGIPSGAINEDLIVCAYRT MALKYHPDKNKEPNAEEKFKEIAEAYD VLSDPKVRGLYDQYGEEGLKTGGGTSG GFRGFHYTFYGDPHATFASFFGGSNPF DIFFASSRSTRPFSGFDPDDMDVDEDED PF/GALFGRFGFQWG*VGGPRRAPGTIV TLGRQGCRRPPVVHELRSLEEIYHGST KRMKITRRRLNPDGRVTRTEDKILHIVIK RGWKEGKITFPKEGDATPDNIPADIVF VLKDKPHAHFRRDGTNVLYSALNSLKE ALCGCTVNPPLFD\GRGIPLPCNDVIKPG TVKRLRGEGLPFPKVPTQRGDLIVEFKV RFPDRLTPQTRQILKQHLPCS
884	8935	A	1824	245	486	
885	8936	A	1825	63	1820	RVDKGGLAAGLRPLGRGSRACVREER EREGRLRGDFQPASLLSRGAINAPNFPAC LKEEEDLSKAMSQDGASQFQEVIRQELE LSVKKLEKILTTASSHEFEHTQKKTWM DFRKLFRHFLQRKGAFWLNLGEKFQRP P*DSIQPYEKIKARGLPDNISSVLNKL VV VKLNGGLGTSMGCKGPKSLIGVRNENTF LDLTVQQIEHLNKTYN TDVPLVLMNSFN TDEDTKILQKYNHCRVKIYTFNQSR PRINKES/LYFPVAKDVSYSGEN TEAW YPP\GHGDIYASFYNSGLLDTFIGEGKE YIFVSNIDNLGATVDLYILNHLMNPPNG KRCEFVMEVTNKT RADVKGGGDNLSQ YGRANLRTWWEIAQVVK/AHHVDEFKS VSKFKIFNTNNLWISLAAVKRLQEQNAI DMEIIVNAKTLDGGLNVIQLETA VGA KSFENSLGINVPRTRFLPVKTTSDLLV MSNLVSLNAGSLTMSEKREFPTVPLVKI RPVLFVRKVQDYLKGFEKIQNRLELDHL TVSGRCDHLEKNGFIKGEPIHPLQIHGD RMDIPTWEPVFREPRLVSGNLRILDH
886	8937	A	1826	48	239	GRAETMSDIEEVVEEYEEEGQEEAAVE EEEDWREDEDEQEEAAEEDSEAEA*D/T RETRAEEDE*YEDASDAEDGPMESELK PWS*RPNLVLP*VLI*FIVVYVDLHRLC ME*DE
887	8938	A	1827	78	357	
888	8939	A	1828	3	327	
889	8940	A	1829	1	429	RAEVALKKKKALSSMRAHYSISYLA DQKRGKKQTAREMKKKILAERRKPLNID HLGEDKL RDKAKEL WETLHQLEIDKFEF GEKLRKLYDITTLRSRWDSTSSPHNP VRGSLTVLGVERPSRGVPRVCVLAAPFIP WGL
890	8941	A	183	1108	1627	PMDQVMCRT*KG*MGGQRDVSP TASEQ VSTARPGPRAVIDYSKADAWAVGAIAY EIFGLVNPFGQGKAHLESRSYQEAQLP ALPESVPPDVRQLVRALLQREASKRPSA RVAANGVLHLSLWGEHILALKNLKLDKM VGLAPPKIGRHFVGQTGSQEEVVVLETK NEDALFG
891	8942	A	1830	3	986	HTPATQSLANGLGRSNVTITRGCEPGA SACSRCCPQGAPALLTDPQKPPTFTMS DEEVEQVEEQYEEEEEAQEEAAEVHEEV HEPEEVQEEKPRPKLTAPKIPEGEKVDF DDIQKKRLNKDLMELQALIDSHFEARKK EEEELSALLERIEKRAERAEEQQRIRA ERERQNR LAEEKARRE REDATRAEDD LAKKKALSSMGANYSSYLGPRLDQKR GKK\QTAREMKKKILAERKPLQPSIHL GERQN*GDQGRSFWETLHQLEDLTKF EFGEKLR\QKYDITTLQEPECRCWPES

						TSKEGLGPPAKGKVGGRWK
892	8943	A	1831	7	1382	PPGLEARPAPARLAGSGVCSGGRGRGAG RRSRQSMRGAARAAWGRAGQPWPRP PAPGPPPPPLPLLLLLLAGLLGAGAQYS SDRCSWKSGSLTHEAHRKEVEQVYLP AAGAVEWMYPTGALIVNLRPNTFSPAR HLTVCIRSFTDSSGANIYLEKTGELRLV PDGDGRPGRVQCFGLEHGGULFVEATPQ S/QDIGRRTTGQYELVRRHRASDLHEL GECPARSSSSSSSSSSSPARAANSHLK WRWSQRCLDVTLPDLALLSVRIL*RW WAAFQSLSRPGCFLTLFFSAPCRPCSDT EVLLAVCTSDFA*VSPRQLSSSSSSSS SSSPHLLPRTAVRGSIQVTHEPERQDS AIHLRVSRLYRQKSRVFEPVPEGDGHWQ GRVRTLLECGVRPGHGDFTGTHMHFG EPRRLCAPKASRTFQRMRYDAQERGL NPLVGWQRN
893	8944	A	1832	1	433	NNPDFKAGV/MALPTL/LQIQRHDDYLV MLKAIRILVQERLTQDAVAKNQTK EGL PVALDKHILGFDTGDAVLNEAAQILRL HIEELRELQTKINEAIVAVQAIHFHWHVW KSKCHILGGGSPENWVCSRDLPLLIAFF FNKV
894	8945	A	1833	1	459	
895	8946	A	1834	2	1108	SFRSDSAPARPLAASPVPAPPAPPRFFSPG RPGDQSEKRWTFRRKLTGSSTTYSP FVFNRRDETEFRNFVWLEDQKIRHYKI EDRGNLRNIHSSDWPKVLAKEYFKIDVN CPFQIDRQETIDWLLGLAVRLEYGR* WLKNTKDLVP**FQNLNDNATKNAEPF DPFWDVNNP*F*GLVLLALG*TWLQIQR HDDFLVMLKANSGFVWQEP*PPGMP VCLRANSNKRGA*PVAFRQTHILGFDTG DASSLMKLEILRIACT*EELRELTQKS TKAIVAVQAIYC*SKRQDHRLGKSLEDE HFEDLQLLTYFRYMLGNHTLLACFGKSK CHNSRGEKSPEKLGYSRGFYHHWLIAS CFFL
896	8947	A	1835	1	891	
897	8948	A	1836	1	984	
898	8949	A	1837	1	1917	
899	8950	A	1838	2	1411	FVGKGPRQAEDSRCGAGRRTGRTLGE QACVWCVPKGRKVAKGGESEWVEGG EGREEKKVGGGPGGRVAAHSGPTGSSA MRRVTFLNGSPNNGKAGAGYGTLSL LSGGSSKPGIKATNVYNGKGLIDDIALI RDDDVLFCGEFPIDPQTDSPKEGLL FHTDWLTLNVGGRYFTTTRSTLVNKEPD SMLAHMFKDKGVWGNKQDHRGAFLID RSPEYFEPILNYLRHGQLIVNDGINLLGV LEEARFFGIDSLIEHLEVAIKNSQPPEDHS PISRKEFVRFLATPTKSELRCQGLNFG ADLSRLDLRYINFKMAQFKPL*FAHANL C*ANLERTDLYGSVLDKANLQGVKMLC SNAEGASLKL CNFEDPSGLKANLEGANL KGVDMEGSQMTGINLRVATLKNALKN CNLRGATLAGTDLENCDSLGCIDLQEAN LRGSNVKGAIFEMLTPLHMSQSVR

900	8951	A	1839	1	320	
901	8952	A	184	56	335	TGFCFFSRVKCNGTILGPCNL*IS/GSKYF SGL/SLPSKWDFRAPPFGNLF**TRF SPVYQDGFDFLTICPPLGLPKLLEFRGA PPLPSE
902	8953	A	1840	1	1430	MAAAEAANCIMELPRAFGIRPSGGSYPP SHVEEGWGRFRPGPHVAAARPPRPGP HTPWGVIDLGPSTMWGVSWEEQCFSAL YQPPSELRGHLLGYRTRFCAFWVSCGQA ESSEKPNADMTSKDYI*LHTHTFGIHE EMLKDEVRTLTYRNSMFHNRHLFKDK VVLDVAGSGTGILCMFCCQGPWPRKVIG IECSSYSS*LWR*RCVQANLPRRGTSI KGKGRKVELPVGERWDIIHQRVGWGY CLFLTESMLQHRALMPRDKWLAPDGLA IFPDRAQLYVTAIRGTGRYKDSRSHLLG ENVYGFDMSCIKDVPIKEPLVDVDPK QLVTQRLAFIKEVDIYTVKVEDLTFNL PRFCPCCLKRN*LTCTALVTLSTFEFTH CHKRTGGTGFFHQPPRSPYTHWKQTVF YMED\YLTRERRAEEIFGTIGMRPNAK EQPGTLDFTIDLDFKG\QLCELSICSTDYR MR
903	8954	A	1841	1	45	
904	8955	A	1842	2	580	GRVGGRVGCEPPAWIDIYKAAGRSSFQ E*ARKMSS*AAFRTSFLGAEDGCISTQ GSWGKVMRMHGPEPHPMRELQEMIDE VDEGSGTVDAFDEFLVMVMVRCMKDD SK\GKF*GRSLSDLLPACFDQKMLDGYA DL\DELED*LLQATGRDPFTEDDDIEELAM KDGDKINNDGRID\YDEFL\EFMKGVGVD A
905	8956	A	1844	2	368	
906	8957	A	1845	28	479	
907	8958	A	1846	4	458	
908	8959	A	1847	90	769	
909	8960	A	1848	231	909	HCSQHLPSSLWISFCFIIPANQFIFRLCTSEA MGKISSLPTQLFKCCFCDFLKVKMHTMS SSHLFYALCLLTFTSSATAGTGDGSAG AELVDALQVPCVEDRGFYFNKPTGYG LPAVRRAPQTGVVDECCFR\SCDLRLE MYCAPPAQCPQLRSVRA\QRHTDMPQD PERKYI*RTQVEGVQETRTTGLEDPPGG VKSDMPPQDPLLCTSYLLNFGTPTKK
910	8961	A	185	523	817	SQHSVGPRQADRLRSGVRDQPGQHGET PSILK\IQKLPRGGACL*SQLGSLRREN CLNPGGRGCSEPRSHHCSPAWMTE*DSI SKNK*INKNEIKKK
911	8962	A	1850	141	439	
912	8963	B	1851	851	1807	MAIKSIYAALRSIYHSEHGRGLFSGLTAT LLRDAPFSGIYLMFYNQTKNIVPHDQGP PLGMFLGQAIHKAQRSCKPALPGPEELP TQGNWK*
913	8964	A	1852	913	1375	SIFPGVVIEHLTLTFIYYHFIINRTSQGIDS QILSLFLFFF/CFETESRSVTQAGVQWR HLGSLQPPPPWFKRFSCLSLQSSWGYRH VPPHPG*FLVFLVGDDGFTMLGQGWWSQ NSCTSRSTRRLRLAQPLFSQFKNCFKNC KSSIGLIPLYYY
914	8965	A	1853	1295	1679	KCINCKVYFTGVFFLIPTCQMQUIHIVCL CLVIISHISFFYFIYFYDIIS*MCNL*ALLD YFNPLEITIHAFCIQFM**LIYL/CFKCILFC GFLGCFLLKIYRF**S*FSFLKCIYS FYSLV
915	8966	A	1854	2	410	
916	8967	A	1855	3	322	

917	8968	A	1856	1	666	SGRDDQGRRAQCSAARCGRPSGGVMED ERSFSDICGGRLALQRRYYSPSCREFCLS CPRLSLRSLTAVTCTVWLAGYGLFTLCE NSMILSAGIFITLLRPLGVSPSVKNDQETL LUIIDSLGQMSTSSYGSGKESTTFNEMGK VK/EIFVNNEAIYMVSI*KHKAIYYLWNL FEKIPVNEPHGDIPKYVPVFQSAKPRLDC LIEVYRSCQEILAHQKATSTSP
918	8969	A	186	49	1357	RTPERCLREVKGATGWPECILT*QTIPRP /YPSVGTAASDTKKKKINNGTNPETTTSG GCHSPEDAQVQTIRILTCQKTELQMALY YSQHAVKQLEGEARDLISRLHDSWKFA GELEQALSAVATQKKKADRYIEELTKER DALSLELYRNTITDEELKEKNAKLQEKL QLVESEKSEIQLNVKELKRKLERAKLLLP QQQLQAEADHLGKELQSVSAKLQAQVE ENELWNRLNQQEEKMWRQEEKIQERE EKIQEQUEEKIREQUEEKMRQEEMMWEK EEKMRRQEEMMWEKEEKIRELEEKMH QEKIREQUEEKRQEEKIREQEKRQEQEA KMWRQEEKIREQUEEKIREQEKMMWRQE EKIHEQEKIREEEKRQEQEEMWRQEEKI REQEIIWRQEKEMHVRTDEISVCSIFQGF ISVGFLCKFAYPFDCFTL
919	8970	A	1861	20	465	VACCVRIPOPPRRSGPAMAVTITLKTLO QQTFKIRMEPDETVKVLKEKIEAEKGRD AFQNMQRQVIQNPALLPALLQQLGQENP QLLQQISRHEQEQFIQMLNEPPGELADISD VEGEVGAIGKEAPQMNYIQVTPQEKEAI *RLKALG
920	8971	A	1862	6	448	
921	8972	A	1863	391	1610	VAMCVEIPGAASLGPRHWPVTITLKTLO QQTFKIRMEPDETVKVLKEKIEAEKGR DAFPVAGQKLIYAGKILSDDVPIRDFA FDGGRNFVVRSWVTKITKAGQGYLQAP PGGSPHSLPQSPLTSFPFPCPHLQACSIPP LAGQRRHKSPSEESGPKTFPESVSGSVP SSG/SGSGREEDAASTLVNGAFY*GR WLTEIMSMGYERERVVAALRASYNPA HRAVEYLLTGIPGSPEPEHGSVQESQVS EQPATEAAGENPLAEFLRDQPIQFQNMRI QVIEEPLRCCPALLPASWAQENPQLLT AKSARPPRSQFIQMLERSPPGEAWADIS DVEGEVGAIGEEAPQMNYIHGDARRRK EAIER*KALGFPESLVIQPYFACEKNED LAANFSLSQNFDE
922	8973	A	187	1	408	ASDRPESRATHASGKSPVFSDESDLDLDF DISKLEQQSKVQNTGHGKPREKSIIDEKF FQSEMEAYLENREKEEERKDDNDDES KSSRNVNKDFDFDPVESEDEDIASDHDE LGSN/EDDEIAEEEEAEESISEI
923	8974	C	1870	293	448	MXKTLQELRAHENEITXVRKVTFNGLN QMIVIGLPPSLTELHLGWQQNQQS*
924	8975	A	1871	1	475	SYIRIADTNITSIPQGLPPS/TELHLDGK ISRVDAAASLKGLNNLAKLGLSFNSISAVD NGSLANTPHLRELHLDNNKLTRVPGGLA EHKYIQVVYLHNNNISVVGSSDFCPPGH NTKKASYSGVS/LFKNPQYWEIQPSTFRC VYVRSAILGNYKKK
925	8976	A	1872	1	636	

926	8977	A	1873	196	1274	IMKATIILLLLAQVSWAGPFQQRGLFDF MLEDEASGVGPEVPDDRDPEPSLGPSP/ CPFRQCHLRVVQCFILGLADKVTGKI FSPLNTLLDLQNNKITEIKDGFKNLKN LHALILVNNKISKVSPGAFTPLVKV/EER LYLSKESA*RELPEKMPKTLQELRALED* /EFTKVRKVTFNGLNQMIVIELGTNPLKS SGIENGAFQGMKKLSYIRIADTNITSIPQG LPPSLTELHLDGNKISRVDAAASKGLNNL AKLGLSFNSISAVDNGSLANTPHLRELHL DNNKLTRVVYLHNNNISVVGSSDFCPPA GHTPKRASYSVSLFSNPVP/QYWEIQH PTFRCVYVRSAILGLGNYK
927	8978	A	1874	248	1393	IMKATIILLLLAQVSWAGPFQQRGLFDF ML*DEASGIGPEVPDDRDPEPSLGPMPCPF PLQCHLRVGGQSDLCLEQMPKDLPPDT VTLADLQNNKITEIKDGFKNLKNLHAL ILVNNKISKVSPGAFTPLVKLERLYLSK NQLKVELPEKMPKTLQELGAHEEWDHQ KWRKS*LFNGLNPMIVHRNWAPIPLKSS VGIENGAFQGMKKLSYIGIADTNITSIP QGLPPSHTKLHLADGKQKSSRVDAASL KGLNNLAKLGIEFSNSISAG*TNGLSGP TRPHLRELHLGQQALPRVPWWGWAE H*VHPRLS*PFITNQYLCRLGSSDFCPPGA HNTKKASYSVSLFSNPVQYWEIQPST FRCVYVRSAILGLGNYK
928	8979	A	1875	81	137	TMAFPAGFGWAAATAAYQVEGGWDAD GKGPCVWDTFTHQGGERVFKNQTDGVA CGSYTLWEEDLKCIKQLGLTHYRFSLSW SRLLPDGTTGFNQKIDYNNKIIDDLLK NGVTPIVTLYHFDLPQTLEDQGGWLSEA IIESFDKYAQFCFSTFGDRVKQWITINEA NVLSVMSYDLGMFPHARSHFGTGGYQA AHNLIKAHARSWHSYDSLFRKRQKGMV SLSLFPARLEPADPNSVSDQEAAKRAITF HLDLFAKPIFIDGDYPEVVKSIASMSQK QGYPSRLPEFTEEEKKMIKGTADFFAV QYYTTRLIKYQENKKGELGTLDQDAEIEFF PDPSWKNVDWIYVVPWGVCCLKLYIKD TYNNPVIYITEDGFPQE*PSAFWMDTSTL GSIFRQTFQELFKAIQLDKVNLQVYCAW SLLDNFEWNQGYSSRFGLFHVD FEDPAR PRVPYTSK*YAKIIRNNGP*RTRGAWLL WPKGALLAAEDPSRQLLKPWLSLQDL DGRQPLQLIK
929	8980	A	1876	243	1126	FQQRLYRAARRFTMVKIAFNTPAVQKE EARQDVEALLSRTVRTQILTGKELRVC HPGKKEGSSGEMLWFTLFRFQFILGGL YLFGGACIYK/YTFMPKRHHFTVGEMCF FDEDPANFPFGGGE*LSCLVT*/EADI REDDNIAIDVPVPSFSDSDPAANYFMTF EKGMTAYLADLLGNCYLMPLQYFYL LWPPKKIWVELFGQTGRVGRYLPQTYV VRLEDLVAVSRKIRDVSNLGIIFYQLCNN RKSFRLLRRRDLLGFNKRAIDKCWKIRH FPNEFIVETKICQE
930	8981	A	1877	985	1401	DFA*V*RDRVFKGTCFLFV*WFLKFFF KMEFLPRLECNGKIHCNLLMGSSNSP TSASQVAGDYRHVLIWWFLIEMEGFPML VRAGLKLLYLEWIGSAF
931	8982	A	1878	184	481	SPRCNPSPLPQAFQSGDCPLPCTAAGL MCAWRSAREPCLLPHCLPRVWHRRDP/ CSQPTSQG*TEALPILCK*KPPWPPEIS PSQWIHQSPADPAL
932	8983	B	1879	148	194	XNILSVIAVRKLFATAAX*

933	8984	B	188	1	1995	MSKETRQSKLAEAKEQLTDHHPQTNPSV GTAASDTKKKKINNGTNPETTTSGGCHS PEDEQKASHQHQEALRRELEAQVHTIRIL TCQKTELQMALYYSQHAVKQLEGEARD LISRLHDSWKFAQELEQALS AVATQKKK ADRYIEELTKERDALSLELYRNTITDEEL KEKNAKLQEKLQVESEKSEIQLNVKEL KRKLERAKLLL PQQLQAEADHLGKEL QSVSAKLQAQVEENELWNRLNQQQEEK MWRQEEKIQEWEEKIQEQEEKIREQEEKI REQEEKMRRQEEMMWEKEEKMRREE MMWEKEEKMRLEEMMWEKEEKIREL EEKMHEQEKIREQEEKRQEEKIREQEK RQEQEAKMWRQEEKIREQEEKIREQEKK MWRQEEKIHEQEKIREEEKRQEQEEMW RQEEKIREQEEIWRQEKMHQEKIRKQ EEKVWRQEEKMHDQEEKIREQEEKMW RQEEKIREQEEKIREQEEKIREQEEKIREQ EEMMQEQUEEKMGEEQEKMQEQEKMR QEEKIREQEEKIREQEKIREQEEKIWEQ EEKIREQEEEMMQEQUEEKMWEQUEEKMC RKRRCKNRRRK YVFARIIQRYVLLNHIIR NRKSVQILVLSCSDFLNSKNSHLLPDTL MLEDKAYLQIESCLIPNEEYQYLAE*
934	8985	A	1880	2	1508	PESVGGGKTLQQUEEKQLQPCMOMDNRL PPKKVPGFCSFRYGLSFLVHCCNVIITAQ RACNLNLTMMVMVNSTDPHGLPNTSTKK LALDNIKWPMYNWSPDQGIILSSITSYG VIIIQVP/VLGYFSGIYSTKKMIGFALCLSS VLSLLIPPAAGIGVAVVVVCRAVQGAA QGIVATAQFEIYVKWAPPLERGLTSMS TSGFLLGPFIVLLVTGVICESLGWPMVfy IFGACGCAVCLLWVLFYDDPKDHPCISI SEKEYITSSLVQQVSSSRQSLPIKAILKSL PVWASIGSFTFFWSHNIMTL YTPMFINS MLHVNKENGFLSSLPYLFADWL/CGNL AGQLSDFFLTRNLSVIAVRKLFTAAGFL LPAIFGVCLPYLSSTFYSIVIFLILAGATGS FCLGGVFINGLGYCSPDILGFIKACSTL/T GN**GGLIAS/TLTGIL/KQDPESA WF*N LQSLMASPLMVTGP*FHPYRLPTARNS RDWAKEKQHHTSPEV
935	8986	A	1881	90	458	HFSRGYLEAFSEISNIRFVPPHSVTVVVV FGACFLCILGIWPWACLPGPGGEGSGGF GEGRGSEAGRLGSVELTPATLPLQAPEA YPVFEPVPPVPEAAQGDTEDEGAPPLK RICPNAPDP
936	8987	A	1882	15	796	PGSTISWRPGLARSLSPDGRPRRGLGP GPSPASMAGR TVRAETRSRAKDDIKKV MATIEKVRKWKKRWVTVAATPFRILNW VA/VVDPQEEER/RREAGGGAERSRGRE RRGRGASPRGGG PALILLDLNDENSNQN FHSEGSLQRGTEPSPGGTPKPNRPCVTL PDPPEGGP*EGLSPPRLGQEERSPGGITV GSTYEPMLTKEEPVELLEAEAEAYP VFETVPPVHETAQGDTEDEGAPPLKRI CPNAPDP
937	8988	A	1883	566	831	ARSFFLITILIQRTDWRKNKFPSNFPNSNL RTNFLDQFLKETILRKH/RVGLGVLAHT CNPSTLGGRGGWSP*GQEFENSLTNMVN HFS
938	8989	A	1884	534	1835	GSSYMHFQGEWVIAQCFKKLHRGVVCV VCL/CLYTHICIF*YITKAILMNY/ACI*KN SCHLAHRFVCMCIYICMYVWCYTVLKI TQ*CMY
939	8990	A	1885	60	395	
940	8991	A	1886	1	193	FRLARGENLEHLRNKTEDLEATSEHFKT TSQKVARKFWWKNAMIVL/VFIHLFIV LFATGAFS

941	8992	A	1887	1	280	
942	8993	A	1888	1	396	
943	8994	A	1889	85	410	DMEEASEGGGNDVRNQLQSEVEGVKNI MTQNVVERILARGENLEHLRNTEDLEK PTSSEHFKTTSQKGGSEKFWWNVKDD CPLICRDCF*SSLLQLWLFAITGAFS
944	8995	A	189	386	1321	RTLERCLTEVGKATGWPOCILTAYRRSL APVLLGSH/HGRGLQTPGKLWSWGKSEE QECEEDGSETETGGQEDLEDLQEEEEVS DMGGDNPEVGKKARNSSKFELRKSPVF SDESDLDLFDISKLEQQSKVQNKGGQKP REKSIVDDKFFKLSEMDLYLENIHKR*E ERKDDNDELDRDSPQTSVGTGATDT KKKKINNGTNPETTSSGGCHSPEDAQVH TIRILTCQKTELQTALYYSQHAARQLEGE SRDLVSCLHDSWKFAGELERALSAVTTQ KKKADRRQTGAESAAVGEGLDGTGDTV SEHWT
945	8996	A	1890	122	975	AARPTRHLCCGQQQVLVCGPSAVGRL PLQWGLGLGPTMSSLGGGSQDAGSSSS STNGSGSGSGSPKAGAADKS AVVAAA APASVADDTPPPGVGTRAVSSVSPSTRA CA/GSRPLSHYSSFGSGSGSGSGMMGG ESA*QGHCGCSRGLPVGQWA*PGGGHG GGQKQPYLKAQKWCCGQPAEQGRAGH GAGSRGTADAAAVFAVHRDAEARGAG ASPADERGGLLACLDMEAVAGAEALNG QSDFPYLGRFPHSTQGLLSLLTPAGVVS WAEKRAAHGRAWA
946	8997	B	1891	1	8736	MPGQILVKAQLFQQKAKSFHRMVLEQ LGIYWETNKPFPFITHENEFEMNHRG ECKTKNYKTSRRKYRRTSLTPRGQQSFL RIQKIGQRYLQYIYQAKASNPECTKNSC KPKDKQPDNRNMGKKTLESDKEGLRPA PIPADPVAGRTLIGKEHVPIWGGVLAS GTSCSLSPAGSPVHPTTLRDHQLGPPQPL WSCLELQPHQTHNKFVGRGGAKERDRN LARACPPLSQGWQRPLNTTINIPAGE NLNL
947	8998	C	1892	377	463	
948	8999	A	1893	753	3000	KLEPCGGTPGPRAGSGPCQDPHIPPEGVG GSPDGP GAWPAPNTHSASWSWGPHPEC PPPA*AADCRGTDRESAPSPVCLSPNS QRPPHLEAPGYLPGGSSRTQPAV/PTCSP PGIP/AVPALCP*PG*KTT/PIYTEAGKLAT SAPGT/PPRQLSPGNAVYCLPPDTHTPG RAGLAESAPYPEAQPAVGQEGDAGTE/ PGPSCQTQH*PPQEPLGPPQL/PPTSQQ PEGGALHWPQRWPRKFPDP/PL/PVRP VWSAKPWNT*RRSPGAPSPTRTAMGT TTPCPRSPDSKHVPLALPGAP/VPAQILD LLPRQALRTEPSAPEPLAGYGDSPWLCG MAVSTGPVLPWLRNGPRTNHSC/CRSRN FASALHGAAPSKSFIRR*WGRTP*PAGC PF/PGLGIVPRSTSSAPTQLGSGNAVVG HVRVLPFSHSDGFLQPMSSSGSLAQQSV WASLGSEQQQVPM LPPASPGTPAARAGP VQFEQCLLSPTWKPY/PAFAQAVP*S RMVCPEAGPRSQQ/PA*QPPGLPPPPAT RVG/PPDVKGGRGLGSPGRPA/PPACMS EQLPIGPLLAWGLQDARPAAGGRAFE* PPGGSSQRFPPSGT*EAE**QF/VNGDGPA PTFSCPMGKPASPCPVRAVPPALPDLVTL GNTAALGGS LKAFGNLQPSLDNSPVP* LLEGPTQPRTTSAPKECSSSPTMPGV GPWVTGTSGRPTFLSPFFSYEEHFKVLLF KEITVQQAEDGFHHRPFPRNKQ

949	9000	A	1894	3	576	LTRIPFLGAKYAPVIFA/EGA/YQ*QRS*T EIQMACFKQATRWWKC/DPRHGKYMA/ CCLLYRGDVFPKDVNAAIATIKTKRSIQ FVDWCPTGFKVGINYSPTV/VPGDLA KVQRAVCMLSNNTAIAEAWARLDHKFD LMYAKRAVHVWYVVEGMEEGEFSEARE DMAALEKDYEEVGVDSVEGEGEEEGEE Y
950	9001	A	1895	58	1636	LVGDGNPGPGVCSCRLRLIPYPLCGECN SIHVGQAGVQIGNACWELSCL*HGIQPD GQMPK*PKPLGEGDDSFNTFFSETGAGK HVPRAVFDLEPTVIDEVRTGTYRQLF HPEQVITGKEDAANNYARGMYTIGKEII DLVLDRIARKLADQCTGLQGFVLFHSF GGGTGSGFTSLDERLSVDYWQESPSL EFSIYPGAPRFPQPVVEPVNSILTHTTLA EHSGLCPSWVENEAIYDICRRNLDIERPT YTNLNRLIASQIVSSITASLRFDGALNVDL TEFQTNLVPLPRHSTSLRPTYAPVNPPS* EKPTHEQAFCSRSPKCFEFPSQPRWL KCDPSPMGKYMACCLLYRIGDVVPKID VNAIAHPSKPKRSVQFVDWCPTGFKI VAJNYQPPTVVPVGDLA/KVQKTVCML SNTTAIAEAWARLDHKFDLMYAKRAF VHWYLGEGMEEGEFKAEDMAALAR KDYEEVGVDSVKGEEGEEGKGILIHSL FGPCSMSCSQNFSLTDRR
951	9002	A	1897	2	350	SQVDR*QSEPEIRICREDHMERLQAFDA NSRKQEAWEKEKAKELEEWYARQDEQ LQKTKANNRVAEKLSTNNPSLT*LVMS EEAFVNDIDESSPGTEWERVARLCDFNP KSLD
952	9003	A	1898	2240	2492	
953	9004	A	1899	1	906	ATAVVSVGRLVVFVSTGCVRAVQLPAMA ELDPFGAPAGAPGGPALNGVAGAGE EDPAAFLAQGESEIAGIENDEAFAILDG GAPGPQPHGEPGGPDVAVDGMNGEYY QESNGPTDSYAAISQVDRLQSEPEIRK WREEQMERLESLDANSPEKKQSWKEK AIKGA*KEWYARQDEQLQKTKANNR VADESFLQTTLR*RDWLCHKHKPSLLQP RTGQPEEALFKDLEGLSPSNEWERVAR LCGL*PPSLSKQAKDVSPHGASVLISLK AGPRWGHLSHPVETLHLQYLNPTQ
954	9005	A	19	12	288	FGGGYIPTWGKGEGILALELNHDISREFC SAPALASRPPTPPPLPPT/PPLPAPRSPA DATPRRVGGPLR*ALKPRAPGPGWSRRR CRSWW
955	9006	A	190	792	1061	GSGV*DQPGQHGTKPSLLKIQLAERGG GHL*SQLRLRLRQENHLNPGGRCCSEPR LLHCTPAW/VNESKTSSQTNKKISQEW CVPIVL
956	9007	A	1900	29	852	PSRSLVRVVEFAPQRWLPGVVSVGRLVF VSPVGVRAVQLPAMAELDPFGAPAGAP GGPALNGVAGAGEENPAAFLAQGES EAGIENDRAFAILDGGAPGPQPHGEP GGPDVAVDGMNGEYYQESNGPTDSYA AISQVDRLQSQPESVRKWREEQMERFG KPFANSRKQEAWEKEKAKELEEWYA RQDEQLPENQKANNR/AQTEARPL*NDI DRESSPRPLKWGNGWPRAV*TLNPPKS*A KQAQKMSPPHDASVLILPLKAGPRWCH
957	9008	A	1901	1	585	

958	9009	A	1902	2	537	GTLRRDFNHN\VELSLLVKKKKRLRVD MLGQKRNWPTRSGLFGSHVQDHDQ VLPLGFPLPRMRVLCMPHFQSTVVIPGR MGSSLLKIRNFLGVKNTTRRVVRMRPGC CLVQYPQAQKDELILEGNNDIEL\VSNSAG LIQQATTV*KQGISGNFLDGIYVSEKGT SCRLMNKI
959	9010	A	1903	560	898	KCNTECFGSLMHFVVVLFIHIFLRQQGR SVTRLECSGAILAHCNLRPLGSLNSPAS ASRVAGTTGTCYRIQLIFVFLVETGFHYV GQAGHKLLT*VIHPPQPPKVLGLQV
960	9011	C	1904	224	379	
961	9012	A	1905	1249	1642	LGCYPGPFHVPKWMIFPDPCESVTVGC VC/G/GVCSCGVC/G/CGCLPGGKGICK YI*ICSQIL
962	9013	A	1906	415	656	SLPRSPLGRGTPSPQHLSSNLNLASLYHP HEITPWIFSSSGSSI*TPI/TPSFYPSPTNCD PQIFDPQTPVSGCRLASSQGPSLSNPTSNL SGPQIPFASYPCLLLAPHPSLPASRPQSCP SPKTWAPPS
963	9014	A	1907	1	417	TISWNTGPRARSRARGSSSTGLDGCVGGG SGGNSGLPCPDLEPLGGLQSKCRLCAPT EARGLWS/KVPLFRQVRHLALHACGCRE AWPPPGPPPLLVALCFHLKALPSRGSRA GREAVSKHLKFAMLAGGRVCGSRRVLS M
964	9015	A	1908	1	438	QCTPSSAADCELTACYGFSS*PS*GPSPL PWRPRMCESWVLHLPPTQCFSWDIGPS EVMVRPLGWDTLRGSMPLW*GAGERA GKPLPAPADASPHRSGTGFDRAAGGRGR RRCNRSEEGVIPFAAPRLPPHAFWRVFP HWETT
965	9016	A	1909	113	704	
966	9017	A	191	2	343	LLFFFFFEMESCSVTRLECSGVISAHCKL C/LPGFKRFSCLSLPSSWDYRRM/PPRLA NFLYFVEMGFHRVAQAGLKLLSSGNLP ASA/F/PKY*NYRRDDASLAACSTFLGLG LLWV
967	9018	A	1910	317	470	NYPMSVVPQDMWRKSHAA/HILREMSS KTAQAQ*WNNAYFGSSKGLSCVWP
968	9019	A	1911	147	850	MAASGAGAEVSGR*GREPPALPPAPCG PARRRRSP*LPKTYRFFSLWQRGRPDRSS APNGNSGLPCPDLEPLGRAARSKCRLCA PTEATKACWK*GPSCFRQVRHLALHA CGCR/EG/LGLPQGPPTSAGLLCAFTLKA LPSRGSPPCKEELSASTSNFSHAGCGRVC GSRRVLSML*FSGKLPLSVVPQDM*RK VSHAAHLREMSSKACRSFADGNNALFLE VSKGLSCVWP
969	9020	A	1912	119	1001	GSRTKGRAVPECACAPVGAGEGRPAGV AVSDGVIVFNDMKVRKSSTPEEVKKR KKAVLFLP*VRTKNHILAEKGKILVGD VGQTVDDPYATF/VSKMLPKDKCRYAL YDATY\ETKESKKEDLVFIFLGPPESAP PLEQNGFMPSSQGRPSKKGSWTGDSSE FAKPNCLPKEGQGTACTLAREAGGQVP VYSPGRAKPFVSPFPCLGASGSPQHL APWGFAGCPPFLQRPGRWGGSPAGGG EIPLNPSCKQTPPNPPGNFSPSNPLDGF WFPKLLFESFDSSWG

970	9021	A	1913	361	1785	LPLPRWKVLLPRDILGPRKINEVSSDDK DAFLCEQTSGLKKTSEVVKSSPLGVT LFMQSNVINSTAIVKTLAATGTGFDCAS KTDIQLCAESRGVPPERIIYGKSFVKQVS QIKYAANNGVQMMTFDSEVELMKVVA RGTFPKAKVWVLRJAIVTDDSKAVCRLSV KFGATLRTSRLLERAKELNIDVVGVSF HVRSGCTDPETFVQAISDARCVFDMGAE VGFSMYLLDIGGGFPGSEADVKLKFEIT RP*STQPLDKYFPSNSWN*KS*LEPGRY YVASTFDALQLISFAKKIKIKRNQTGS**P KIESELSRPLMYVYVNDGVYGSFNCILY DHAHVKPLLQKRPKPR*RRYSSSIWGP TCDGLDRIVERCDLPEMHVGDWMLFE NMGAYTVAAASNVPMLPRGPTIYYVM SGPAWQLIQFQNP/GFPFGSRROPQCP APCPVFCAWESGMKRTRASPVPSPG
971	9022	A	1914	501	746	ARSSLVLLFIYIFRDRVLLCHSGWSAVVQ SWFTAALISQA*VILK*FSLSLPSSWDY RQVSPHPANF/SYILFCRDR/SFTMLPRVG WNSWAQVLLLIQPPKVLQL*AGCHGSCL
972	9023	A	1915	156	166	VLFLKRPYLVDVAVLWLFTAISHSTLEL LGSSYPTTSAS*VKHSNSNIMKFKVPVLN ECTMQLGKTMIKVLVKSYP
973	9024	A	1916	452	1017	SLHGSRPHLPTGRLLGPETCAGFSRFGQ NESLTPFVTSDRISKNRKRFKAPFPHE GKIMSSPLSKELRQDVQLCGSDARS*KD DEVQVVRGHL*GSAKLAKVVQVYRK KYVIYIERVQREKANGTTVHVGHFTPS KQVVIT*G*NWDQRPKRSLRTGPKPSR VQVGKGRGKYKERTIEKMQE
974	9025	A	1917	3	474	
975	9026	A	1918	1	246	
976	9027	A	1919	373	560	SQLKNAKFNLSRPLPPNVY*DKGQYVTS QLYQNAAQPIFKQAFETCAHHTNTIQD QAPRRI
977	9028	A	192	2	447	KEEIIPIL*NLFQNIKAEGILRISFNARITL I/PKPN/RAITRKINPIDQSLMDRHAELNK ISAN*IR*RMKRIIPHGQVRFS*GMWGW NIRKQINVIHHTSLKKKNHMIISINAEKE FDKIRKLLKLRLNIYKRG*LT**VMVRNS
978	9029	A	1920	837	1441	IFFFHLSPSHSHARSHFLFAIMNRPAPVEI SYEDMRFLITHNPTNATLNKFTGT*GS MGVTDGFGVCGWLHMDKAPVWKKE GFHVLWDWPFDDGSSTPLIQIVGWIGFK PV*KTKFSCSHGCCVAVHCVGRVGE APVL/VLALALDWNVGMKVEDAVQFIR QKRRGAFNSKQLLYLEKYRPMRLRFR DTNGHCCVQ
979	9030	A	1921	2	1059	GRVGFFAGNPGSDSFGGLLGLTPVLR WVADGGTIPKRHELVKGPKEKVDK ETELVAQWNYCTLSQEILRRPIVACELG RLYNKPEPVIEFLDKSAEKALGKGSISH* NALTNC*QS*KLSDNPCPGKGKIGNTKG DKHDDLQAGASF/CP/LVGGPGRWNGR HRFLPSGGCGLCCFS*AEPWKEIKAFC HTCGAGLSRRMMIIVLNGTKEDVDVLKT RME/AEKAVERSFKRISKPKAAESVSKT QMSVEGSPRAHQKLPGKP*RSFALDSR EKKTNLAPKSTAMNESSGKAGKASVW SHKEVHR*PVKNRPNKSLFTTHSFRQS APKEGVCPTGVHPTRPTCF
980	9031	A	1922	272	467	
981	9032	B	1923	131	268	XFVTCPNEKVAKEIARAVVEKRLAACV NLIPQITSYEWKGKIEEDX*

982	9033	A	1924	2	353	GSPPTQPSPASDSGSGYVPGSVSAAFVT CPNEKVAKEIARAVVEKRLAACVNLIPQI TSIYEWKKGIEEDSEVLMSVHPYEVAEV IALPVEHGNFPYLQWVRQVTEVSVDST VLP
983	9034	A	1925	70	357	
984	9035	B	1926	120	839	MSGGRAPAVLLGGVVS DRPRPAPSGPRS LDRYPHPKSQRRFAKEIARAVVEKRLAA CVNLIPQITSIYEWKKGIEEDSEVLMMIK TQSSLVPALTDVFRSVHPYEVAE*
985	9036	A	1927	259	935	GASLLLSFVWMPALLPVGLPAFLFANPE SLLTMG/SLGSPSDPSRPASDSGSGYVP GSVSAVAVTNCNEKGS PREIARAVGGR RRLAAACVQPSSPQITIPSMKWKGKDSR EDS*GCWMDGFKTQKFPWVPFWDV RSVAPYEVAEVIALPVEQGNFPYLQW VRQVTEVSVDSTILAMMSPVPAHHEDP RDTSKAFLTFQVMTWAPNKSRLWVKKK KKS
986	9037	A	1928	285	476	LLKHLINNMVSKTTWLGVLHTCNP/ TNFLGGRGRIS*QEFEEASLGNMGRPC LYKNRQKTN
987	9038	A	1929	218	602	NGGQAVAHACNPSTLGGQWRVDHLRS GVRDQPGQRGETPSLLKIQKLAGRGGAR LWSQLRLRLRQENRLNLGGGCSEPRW HHCIPAWGNKKE*NGNYAQRMGERWL TGLKHQRNGEDRTVRELGR
988	9039	A	193	128	363	VHTWMLSSP*GPQGVFHAQIRGCPFLSP *RCQFQVFSLFYFDLLWVFTILFFLEAE YHFVARLECSGLISAHCNLC
989	9040	A	1933	2	355	TSMLGCTVFLR/YCVYSYCNVLATVW SSLV*RSLRICLHLVS/WSFVTDCKACYN TGMLFYSDY**FVYYF*YYCFFLCSLFFSI CLLMYFNIFFF/CNFMFDCYILLLSFYFIIL YHYF
990	9041	A	1936	139	782	GLHHGCSLGMEEAAGRDRSRSCRAP QHHRPPPLSCQQRLLGEAGRGGVRGK HGSL*KQAPPPGRAETPGLANHTLPPR VPP/SEGQHPREGQGLHGGPGKEKGKPH RRKLKASVPCVSAERVNGPKGSSLQTAR IHPTGGHRKPTGAVCVCAHAHTSAAR GPLRPHHTACPAHVCTRRCRREHTPPSL CTRVPLSGPGGSSLLHVVLRA
991	9042	A	1937	1	1878	
992	9043	A	1938	345	557	LYMLIRMRLKEGRAKMVESIFR**FILE* SVLS/RIMKPGMYPVLNRWVKCGNSSSV SYPEEKVVGWLLKFI
993	9044	A	1939	345	511	ARDATFVNGLDYLITLPYCGWKDCKKK CPLRQFP*PFNCCFLVVFVRV*KHSLP
994	9045	A	194	233	598	
995	9046	A	1940	827	2660	
996	9047	A	1941	478	1150	SMPWQIGRSSVSAPPTITPTSSTASWTIVS STIWSPHVPATTKVSTLHWTVVRLLVII SKIIVISTSISSSIVVITTSVAPTIVAJSRS TTISSSSSITGATSKIATSRSSSAGSRAE VLLAELFLEQRQFSLQRQDESGSCSSAEI SLISLGCCKSG*SD*VRDGERKRNSVSS LLVA*ALKPQKKV*GTTTNGESLQTVW **GILQAKDQEDLVL
997	9048	A	1942	123	734	LFKSAIKNGLQHELHCRKWEKKQNGKS KKVQAEAPVESGVEKVLDRRVVNGKV EYFLKWKGFTDADNTWEPEENLDCPE LD*SRFLNFSRKAGQRKRWPKRKSLSD VESDDSQIHRRKRDAADQPKEDFARGUL DP*KK*LAGHRPASGEVLMFLMKWKDS DEADLVIAKEANMKCPQIVIAFYEEKP TWHSCPVEDEAQ

998	9049	A	1943	1092	1285	IDVCVCLALLRLECSSVISAHCSLCS/SG SSDPPTSAS*VAGTTTACHHAQLIFGFFFF LKRWGF
999	9050	A	1944	76	532	LPRPRSRLTALPPPPSFLQTPKSRALMAG LEVLFAAAPAITCRQDALVCFLHWEVV THGYCGLGVDQPGPNDKKSELLPAGW NNNKDLYVLRYEYKDGSRKLLVKAITV ESSMILNVRTYKNSEELSRIVSGIITPIH EQWEKANVSSP
1000	9051	A	1945	109	1008	ALPPPPSFLHTPKSRALMAGLEVLFAA PAITCRQDALVCFLHWEVVTHGYFGLG VGDQPGPNDKKSELLPAGWNNNKDLY VLRYEY*GWGPESFLVESHPWESSIDSS MLLGIMGSQQSWQI*PLNLG*LFSMAEH LGDFHRTYKNSEELSRIGAIGLTPIHEQ WEKANVSSPHREFPPATAREVDPLRIPPH HPHTSRQPPWCDPLGPFVVGEDLDPF GPRRVGMNVDPRLRSGLPRAFNDPSSG LPNRLPPGAVPQAGFDPPGPIGTSPPG VNPADHLPPLPPGYDDMYL
1001	9052	A	1946	152	991	RKTKCVTRPAVVVFQSPLTSRSSRASACE VAFPRGQPRKGPKRDNWILGTRPSWVA VCSSPRLGLSRYEYKLVMLGAGGVGKSA MTMQFISHRFPEDHPTIEDAYKIRIRIDD EPANLDILDTAGQAEFTAMRVDQYMRA GEGFIIC*LLSRIRRSFHEVPESLNQLIYR VRRTDDTPVVV/VWGNKSDLQTA*DRF TKGRKGLALAPENSSCPLFWRTSGCHTR YYIDGCFPHAPVRENRKEKEAVLAM EKKS*APKTSVWKEAKNHPFRKKKDSV T
1002	9053	A	1947	305	406	
1003	9054	A	1948	372	501	RPGAVAHSCNSSTLGGRGRWIT*GLEFE TCLANMVKLCFLHLY
1004	9055	A	1949	441	812	ITTHLYISKPLLCTPMKTYNYLSIAKIKF *FSLLRQGLALSPRLECTSITAHCSLNL GFKQSSHSQPSE*LGTTDTHHHIQLVFLIL /AETEFCHVAQGG/LNIS*VQLIHLPQTSK VLGLQM
1005	9056	A	195	38	1222	EPESCSVTRLECSGVISAHCNFR/LPGFKN FPASASQVHGTTGTPHHAQLILYF*VEE QGFPMLAPGWILGSP*PLMDPAPSLALP QSAGDPQP*AHPHPGPSYLFLFKERENYE RPKII*LNPLPLAQGKKMEFALIWVMKH TQ*IRNNHIFSKRQK/C*DL*SYMVAYFW VGKK*EKNITSLTGNDTF**KILLSFPTRM IHCKAKIY/IAKFFFWRRSLTSVTLGWSA VWHNLSSLQPPPSGLKRLSHLNLNLT/W DYRPPCPANLCFVVVVVLLFVFW*RW GFTMLARLISNS*PQ/CDPPTSASQSAEIT GMS/HPCLAMGFVFLTL*KPPFFKDYM KSFFQFFKYLIQG*CSLV*GVYRSSLIFF F/CFFETESCLVTQAGVQWRDLGSLQS
1006	9057	A	1950	2	370	
1007	9058	B	1951	209	524	MLLSLAAFSVISVVSYLILALLSVTISFRI YKSVIQAQVKSEEGHPFKAYLDVDITLSS EAFHNYMNAAMVHINRALKLIIRLFLVE DLVDSLKLAVFMWLMTYVX*
1008	9059	A	1952	3	463	

1009	9060	A	1953	49	1129	RD LIEFSCRILFPLPSLPRI SFHPSPTLAR VAMA EPSAATQSHSISSSSFGA EPSAPGG GGSPGSLPRPWGPKSCSSSICAVHDLIFW RDVKTGFVFGTTLIMLLSLAIAFSVISV VSYLILALSVTISFRVYKFVIAVQKSE EIGHPFQKPNWNVDITLSSKSFSNNMNA AILHINMFLKLIIRLFLVEDLVDSLKLAVF MWLM TYVGAVFNGITLLILAE LFISVPI VL* RKYKTQIDHYVGIARDQTKSIVEKIP SKTPLGI AKKKGRK YMETRNATSYLKH HLISYNVVTCTMKENTQCQLEPAFQAFF LIWCFLPSFFNPQSSSTKIDGLIKDLFLD LRRRKNQIS
1010	9061	A	1954	46	519	SQTPMGHFTEDKATITSLWGKVNVE DAGGETLGRLLVVYPMGPQRFL*PALG NLSSASAIHGQPPK SRAHQEGC* RSLG DAIKAPGIDLQRAFFAQA*SELALVDKLA MWD SLRNFKASWGKFLVD PFLAIPFSA KEFHPLRCQVFLGQKDG
1011	9062	A	1955	1	747	
1012	9063	A	1956	1	813	MKEENLCQAFSDALLCKIEDIDNEDWEN PQLCSDYVKDIYQYLRQLEVGLQ SINPH FLDGRDINGRM/RAILVDWL VQVHSKFR LLQETLYMCVGIMDRFLQLSLPAEDREA LGTSSPQHSGALGDVGYKSGFILSPHPC MSKIEPEDEKLSFLFIGPFLKNPSPRANG DPMFLCLNEDEAQLEETKWTGCQKQL CDPLSEE VKTGEKLVQTKGERTSRIREV QFLAQNH TTRRWQSWDLGTSSLTPEPVF SLEINVREQRDEDNIQVLRG
1013	9064	A	1957	1	1390	EATASKIPSAAGSESSPNGASYASVPPFS VRVPPWAGLALLPSPSLMALLRRPTVSS DLENIDTGVNSKVKSHVTIRRTVLEEIG NRVTTRAAQVAKESGTPKFQVQPTKTT NVNKLAKPTASCQTQYQMGKVWLPKG PSPTAEDVSMKGRESLPKLFSDALLCKI EDIDNEDWENPRLCSDYVKDIYQYLRQ LEV LQ SINPHFLDGRDINGRMRAILVD WL VQVHSKFRLLQETLYMCVGIMGSD F*QVQPVSRKKLQLVGITALLAPKYEK MFSPNIEDFVYITDNAYPS SQIREMETLI LKELKFELGRPLPLHFLRRAS*AGEVDVE QHTLAKYLMELTIDYDMVHYHPF*G* PAAASVCLSQVLDKGKME L*SQYYHK DTQENEVLEVHASTMAQECGAK*MENL NLNSIGHQRIKYAKQQT* KISMIPQLNS KAVKDLAASP LIGRS
1014	9065	A	196	526	835	FNLNFTVSLRTHSPLIPFFSSNERIKPGKS TIDGPWTRRTRL*RKNLWMIQ*LWDFLF/ VLFETDSSSVARLECSGAISVHYNFHLP SSDSPDSRSMPIVDRO
1015	9066	A	1964	33	513	
1016	9067	A	1965	1	503	GHESDNLLFVQITGKKPNFEVGSSRQLK LSITKKSSPSVKPAVDPAAAKLWTL SAN DMEDDSMDLIDSDELDPEDLK KPD PAS VLA VASCGEGKKRKACKNCTCGLAEEL EKEKSREQMSSQPKSAICGNCYRGAMPS GCASCPYLGM PAFKPGK VLLSDSNLHD A

1017	9068	A	1966	29	1270	FFFWPAVFQVCQYCTARMADFGISAGQF VAVVWDKSSPV EAL KGLVDKLQAF/TP GNEGRVSVENIKA AAVAILPTKNPSFGHY FVQ/CLVPGKAPLW HSA*DFWAGNPPGF LRPGWMFFFLKEPVETA VR*Q*AKWKT ASKL\CSAL\TSLGLV/EKLKELQREPLTPE EVQSVREHLGHESDNL FVQITGKKPNF EVGSSRQLKLSITKKSSPSVKPAVDPAAA KLWTL SANDMEDDSMCIFCGCSLTHR W PLEHV VQVE/IMMDQPKRRTRVDTFFTP RTPKFPSRSPASHFSFSIKQKT/TRPVSLIA LNTL\QDLIDSDELLDPEDLK KPDPSLLR AASCGEGKKRKACKNCTCGLAEELEKE KSREQMSSQPKSACGN CYLGDAFRCAS CPYLGMPAFKPG EKVL LSDSNLHDA
1018	9069	A	1967	3	498	LANRAIMSHKQIYYSDKYDDEEFYRLV LAREQLATGRELWPLRAQGISNRN*GDR IGACVRDMSCCPKDIAKL VPRTHLMSES EWRNLGVQ/QRSQGWVHYMIHEPEPHI LLFRRPLPRKPKEMKLGKLT FQPSFYT AGPYLPNIFLDNIYVGLLVFFTFDI
1019	9070	A	1968	1	690	RRKAFPKRLPKMAEVQVLVLADGGQHL LGR LAIAIVAKQVLLGRKGCSYACEGI HISGNFLQNQVCSTLAFPLQA/RMNTNPA SQGPYHFGAPSRIFWRTVVRGMLPHKT KAEARPLLDRLKVFDGIPPPYD\KKKR\ MVVPAALKVVRFEAYTESFAYLGR LA PEVGWNAIRPVTAPPGERGKRKAKIH YRKKK*LMLR\RKQAREETWRKKIDKY TEVLKTHGLLV
1020	9071	A	1969	2064	2561	KRFWSFALFYILKLL/CIDSIVRIGTILY STVLFFIFLKFKV*LVLITFIQIFAIFGSET F*QVGV*FLLIPNFFSRVLLILSEGKVI*VC QLIVLLGLNFHIVFTVYGEVVGIIYSILN K/AVIHFFIKV/YFHV KFLFLYVLLSYIT QFLF*KSSFVEVLVKN
1021	9072	C	197	7	276	MQWRDHNYCIFXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXLARPFI*
1022	9073	A	1972	786	1502	PPPTKKEMFVPYSPEQRIETSIPPPFKGTG RP/PGQGRTWERPPFSLEGKAGALPPLLS PRTTKGEDPSETLAQSGSQEGDCLNRW QHLH*SAFRPSSAEPFTRKRLEGGPAPLR YPGAGNEPGRDAEGRP*GALAGRPRWP PSHGRPPPAPCHPASRGGTARKTP/GRST KPPRFPPPLGDATSGKAIPANGRKGGA MSPHRGAGPASPSRFFSHIKQGRAIPHVS SRLHFSPSSSGSR
1023	9074	A	1973	8	234	SAQMAVTTADPRVRPRVRTQLCSLASLI QTLLVHLTPEEKSAVTALWGK VNVDE VGGKALGRLLVLPWDPKRSFQSPLGES VPTP*MKVGGKALGRLLVLPWDPKRS F
1024	9075	A	1974	1	169	NLYISNLPLSMDEQELENMLKPFQGVIST RILRDSSGTSRGVGFARMESTEKCEG
1025	9076	A	1975	2	219	
1026	9077	A	1976	17	795	HSTAKLY*HSTFAKRSHRNPQHPYVP*IS KSLTSSINSSTSSNSGWDQLSKTNLYIRG LPPHTTDQDLVKLCQPYGKIVSTNAILHK TTNKCKGYGFVDFDSPVAAQKAVSALK ASGVQAQMAKQEQDPTNLYISNLPLS MDKQELENMLKPFQGVISTRILRDASGT SRGVGFARTESTEKCEAVMVQSPSWTQ PPYILQHPGAVLTSPMEHTMSLQPASM ISPLAQQMSHLSLGSTGYMPATSAMQG AYLPQY

1027	9078	A	1977	3	1421	CLRRLEHEFGTRPPPTPLPSSPERERQESP RLGNPKVSATLHGRLPSSFMGKVWKQQ MYPQYATYYYPQYLQAKQTLVPAHPM APPSPTTSDNHRISISSNSRWDQLSRTN LYIRGLPPHTTDQDLVKLCQPYGKIVS TKGNFGIRTNNCKGYGFLDF*QPMQQ LKKAVSALKASGGSSSKWAKQQGDVP TNLYISNLALSMDIEQELNMLKPFQGV ISTRILRDSSGTSRGVGFARMESTEKCE AVIGHFNGKFIK\TPPGVSCPHRNLL\CV LSFAGWEGQEKGDRTPNKYIPNGRPWA *EEGRGETLLGLTL\YTDPTTAAIQNGF YPSPYSIATNRMITQTSITPYIASTVHAFQ VQSPSWMQPQPYILHDPGAVLTSPMEH TMSLQPASMSPLAQMSHLSLCSTGT MPATSAMQGAYLPQYAHMQTTAVPVE EASGQQQVAVETFNDHSPYTFQPNK
1028	9079	A	1978	2	1440	NSGPSSFMGKVWKQQMYPQYATYYYP QYLQA/KVWKAFGNTK*KGRVKNRKML VGWQTL*TLFLVGQKNQSLVPAHPMA PPSPSTTSSNNSSSSSSNSGWDQLSKTNL YIRGLPPHTTDQDLVKLCQPYGKIVSTK AILDKTTNKCKGYGFVDFDSPAQAQA VSALKASGVQAQMAKQQEQDPTNLYIS NLPLSMDEQELNMLKPFQGVISTRILRD SSGTSRGVGFARMESTEKCEAVIGHFNG KFIKTPPGVSAPTEPLLCKFADGGQKKR QNPKNKYIPNGRPWHREGEVRLAGMTLT YDPTTAAIQNGFYPSPYSIATNRMITQTSI TPYIASPVSAYQVAKETRENKYRGSJK VQSPSWMQPQPIFYQHPGAVLTPSM KHTMSLQPASMIQPFWPQMSPSVH*G QHPEPYHALQPSSLCKGALLGPQYCTYC RLTAVPC*GRQSGQTGRLAVRGRNLDPF SIYRFNPNK
1029	9080	A	1979	104	340	TGQSYKKRKFVKWLKQINRYLTSFLF/VF KEIRSHSVA*TLEHSGAIMAHCSLKFLGL SNPPASASQVAGTSGVQYHTSLI
1030	9081	C	198	2	28	MIDTHTPS*
1031	9082	A	1980	118	528	
1032	9083	A	1981	1	864	
1033	9084	A	1982	3	4258	
1034	9085	A	1983	44	1360	VWDCPGLRWASFYLRLSWRAHRPQCGT ISFVTVNAEEQEQFVSSRTKQKAKEEK LEKCGEDDETIPSEYRLKPATDKDGKPLL PEPEEKPKPRSESELIDELSEDFDLSECKE KPSKPTEKTEESKAAAPAVSEAVSRTS MCSIQSAPPEPATLKGTVPDDAVEALA DSLKGKEADPEDGKPVMDKVKEKAKEE DREKLGEKEETIPPDYRLEEVKDKDGKP LLPKESKEQLPPMSEDFLLDALSEDFSGP QNASSLKFEAKLAAAISEVVSQTPASTT QAGAPPRDTSSDKDLDDALDKLSDSLEQ RQPDPDENKPMEDKVKEKAKAEHRDKL GERDDTIPPEYRHLLDDNGQDKPVKPPT KKSSEDSSKPADDQDPIDALSGDLSDSCPS TTETSQNTAKDKCKKAASSSKAPKNGG KAKDSAKTTEETSKPKDD

1035	9086	A	1984	159	2467	EKKGSY EKKAASLGSSQSSRTYAGGTAS VTKVSAFSGATSKSYSMNP TETKAIPVS QQMEGPHLPNKKKHKKQAVKTEPEKKS QSTKLSVVHEKKSQEGKPKHETEPKSLP KQASDTG\SNDAHNKKA VRSAAEQQP\S EKSTEPKTKPQDMISAGGESVAGITAISG KPGDKKKEKKS LTPAVPVESKPDKPSGK SGMDAGLAD\DLIDTLGGPEETEEENTTY TGPEVSDPMSSTYIEELGKREVTIPPKYR ELLAKKEGITGPPADSSKPIGPD DAIDAL SSDFTCGSPTAAGKKTEKEESTEVLKAQ SAGTVRSAAPPQEKKRKVEKDTMSDQA LEALSASLGTRQAEPELDLRSIKEVDEAK AKEEKLEKCGEDDETIPSEYRLK PATDK DGKPLLPEPEEKPKPRSESELIDELSEDF DRSECKEKPSKPTKTEESKAAAPAPVS EAVSRTSMCSIQSAPPEAGTLKGT VQDD AVEALADSLGKKEADPEDGKPVMDKVK EKAKEEDREKLAGEKEETIPPDYRLEE VK DKDGKATPCPKSLKEQLPPMSEDFLLD ALSEDFSGPQNASSLNFEDAKLAGAISE VVVSQNP RSTT/TQAGAP\PRDTSQSD\K ALGD\ALDKLSDSLGIQR\QPDPG*GTNQ WEG*S*REKAKAEHRDKLGRKRWTLFP PEYRHLL\DDNG\QDKPVEGHLTKKSEN QRNPGDDQ\DPIDALSEDLAD\SCPSTTET SQNTAK\DKCKKAASS\SKAPKNGGKAK DSAKATEGTSKIPKDD
1036	9087	A	1985	2	788	EFSASIVGICTMPWALLLLTLLTHSAVSV VQAGLTQPPSVSKDLR\QTATLTCTGNS DNVGYQGAAWLQHHQHHPKLLFSRN NNRPSGIHKRFYGSNSGTTATLTISGLQ AMDEG\DYCNSRDSSGNHLRVFGGVT QVDPSLRVRQGMPPWVNFVPGPSSEEAS SPNKAHTGVVFISDFLTPGNP*QVA\WKA DSQPPFKAGVETPPHPPKQSNKYTDSIS YLSLTP*PGGSPHRS LQLARVTH*RGAPL EKT VAPTRMFH
1037	9088	A	1986	226	401	TSGDHWNI AVAPHENS DLLL VQGH DYK YRYFGLIVCVL*QAI VTPEEPQSIVPRLRT R
1038	9089	C	1987	211	285	MFYPFFNPRYFSVGFIAMNRHTD**
1039	9090	A	1988	107	192	
1040	9091	A	1989	1	285	YIYIYIYIYIYIYIYIYIYIYIYNLDQSWS FAPLLVCGP**AQVVTSELGNRN*SEKTF TWRICMRNIGRCSLGMLQDYFKPFDERS KVMLVV
1041	9092	A	199	780	888	NKR NQGSSRVGTHL*SQLL/RRLRQENH LNPEGRGCS
1042	9093	A	1990	27	437	IAEGNWCVYMPDIIWVFPQAEAEEDCH SDTVRADDDEENESPAETDLQAQLQMF RAQWMFELAPGVSSSNLENRPCRAARG SL\QKTSADTKGKQEQAKEEKL SIIDIVT NYIFFFWHMEIFTDTVSRHYNQTFGT

1043	9094	A	1991	25	1488	GGSSAAASGVSSRADAPVLAQSPASAGN GRPSTPRVPGSRRHPSAPRSGPLPREDGC RTPGPQLPLPGAALLRPRTALLSSAAEDK ARSRHPDTQHPSSGGRCRGGTESPSSAA GRPASMAEAEEDCHSDTVRADDDEENE SPAETDVQALIPMIQAQWKLEPAPRVTS SRLENRPCRAARGSLQKTSADTKGKQEQ AKEEKARELFLKAVEEEQNGALYEAIF YRRAMQLVPDIEFKITFTRSPDGDGVG NSYIEDNDDDSKMADLLSYFQQQLTFQE SVLKLQPELESSQIHISVLQMEVLMYIF RWVVSDDLTLSEQLSLVCGRGFLTSC ARDP*KYARPGPALKVWGQKACIKLVS VTRPGREDVF*ERPPVS/RFDGVYISKTT YIRQGEQSLDGFYRA\WHQVEYYRYIRF FPDGHVMMMLTTPEEPQSIVPRL\TREYQ GLDAIPTGV\IRLSPRHRTIRTQSIWLLIT KEKRKEKPL
1044	9095	A	1992	242	433	
1045	9096	A	1993	243	549	
1046	9097	A	1994	81	436	AKQGISPEGVMDVNTALQEVKLALIH VWT*TRGNSRS*PKPLDKRQAHLCVLA SN\CDEP\MYVKLVEALCAEHQINLN*GL IDNNET/MGEWG*GLLLKFDRGGGKPRK SWFG\CCSC
1047	9098	A	1995	3	452	
1048	9099	A	1996	3	484	PTLLVPTDSERTHPWLLSPADKTTVK/AP AWGKVGAAHAVRSMCAEALERMFLSFPT TKTYFPHFDLSHG\SAQV*GPRARKVAD AL\TNAVAQRGT\IAQRAVPPLSD\HAH KL\RVGPGSTFKLLKATGLLG*PWPGPPS PAEFNPWRLQRLPWDKVS\WVSC
1049	9100	A	1997	797	1049	SEEECCSCLPSPAGSDQRLCTHLPCVI VNSEWGVARY*LNVCS*PVFFSVGPK QYPYNNLYLERGGDPSKEPERVVHYEI
1050	9101	A	2	25	619	EFHRLRENPPWCSSPADKTNVKAAGWK VGAHAGEYGAEALERMFLSFPTTKTYFP HFDLSHG\SAQVKGHGKKVADALTNA VAHVDDMPNALSALS\DLHAHKL\RV\D PVNFQSS*SQLPCLGEPWAAHLP\AEFQP LAVATSSLGTFKPGLSVEAPLLTFQITFK GWKPRVGHAFFALWASPQLLPFPAPVP PWSLK
1051	9102	B	20	103	282	EDTAAQSSPGRGEEAEASAAEAQGGEQ AYLAGLAGQYHLERYPDSYESMSEPPIA HLLRP*
1052	9103	A	200	224	552	KVLRVARCGGSLSRPSTLGGQGGRLM RSGVRDQPGQHSETPSLLKMQLAGHG G/RAL*SQLLGRLROENHLNPGGRGCSEL RSRHCIPSRVTV*DSISKKRKKVL
1053	9104	A	2000	546	882	CHVPPTLGTRGQTHQDPFFPHSPGAP APCPPPA/LLGPPRPFPSPVPGGENRK PFTSAP*A*VFPRTPLGALSRG*GSPVVG RGATPSPTSPACGPLKCWWHLIKN
1054	9105	A	2001	43	311	
1055	9106	A	2002	178	817	SPASGHCRNLNGAAVAMFGCLVAGRLVQ TA*QQVAEDKFVFDLPDYESINHVVF MLGNNP\FPEGMGGSVYFSPDSNGMP VWKLLG\SVTNGKPSAIFKISGLKSGEGS QHPFGA/NEYCPNLHLLRLGISGELLDS MAQQT*CCWYPQFDSFTQFTQKML DNFY\NFC\SSFAVSQAQMTPS/SI*KCSFR PNV\VLKWYEAFVSNIKAFYN

1056	9107	A	2003	283	840	TLPAGFTDVISIHKKTGENFCLICGNGRFA VHCITLEEAKYKLCCKVRKIWFHDAHTIH YLDSEVVKVNDTV*TGKITDFIKFDTGNLG RIGVITNRKKHRSFDDVHVVDANGNRF APWLSNIFVTGKCNKPWISLPRGKGIRLT IAFHSDKWFCSDISVQNLCKRFSQGDGTGI KNSEARRCSNLQV
1057	9108	A	2004	1	966	GRPAPEDGGPLSLPNAAMARGPKKHLK RVAAPKHWMLDKLTGVFAPRPSTGPHK LRECLPFHFLRNRLKIYALTGDVEVKKI CMQRAFIKNDGQVRN*YNLPLLGFMDVA SNEKTGENFPF*SN*HPRGPLLL*HRITPE EAKYK/VCAKMRKIFCGPTKGIPHLVTS *CPAPHPAYPRNPLIQGEMNTHSRILET GQD/ITDFHSKFDHLVTLCMVTGGANL GRNWVLITQRRGTPGSFDRWFT*KDA NGNKLLATSDFSNIWLLGKGNKPWISL VPRGKGIPPHLLEERDKRLAAKQSSWV KWGPWVTWSDLLVP
1058	9109	A	2005	1	383	RIRKLCLNICVGESGDRLTAAKVLEQLT GQTPVFSKIVREYELRKNFSDTGNFGF GIQEHIDLGKIDPSIGIYGLDFYVVLGRP GFSIADKKRRTGCIGAKHRISKEEAMRW FQQKYDGHILPGK
1059	9110	A	2006	3	224	
1060	9111	A	2007	176	384	
1061	9112	A	2008	2	669	IMAQDQGEKENPHAGNFAFRKLVNLIC VGESGDRPTRAQVLEPAQQGKTPCVF PKA*HTPVKSLWASRRNEKIAFPTATSS EGAKARRNLCRRGLKRFSEYGVQDNTT FSGYWETFSGIYQEHIDLGKIDPSIGIY GPGTSYVV/LGVRPGFQHPQTKKPPQGQ CIGAKHRASKEEAMRWVQKYDGHILP GQINSPFLSKSKSNKFSVNKKNNKITL
1062	9113	A	2009	688	884	CSCVWNLSFHGNAFHLKTPYSRIKKAH /WMAHVYSPITLGGRGGWIT*SQEFETSL SNIKPCLY
1063	9114	A	201	41	320	
1064	9115	A	2010	442	780	IEFVIKKIFFFSHCLICLAIDLQLQ*YMG VPRWMLKTCYVRGKYRGVLEEQNIL WK*IHPLQVREDGRPCLPLRKLGGKGG GGGEPLNQHGDPVQGNPPYFLFCHMRN P
1065	9116	A	2011	136	219	DPAREGHPVCCAGQRPCVDGHGQEKGF LKAALVELGASNPWS*DTVEKVPQSALP QASALTIWVSYYQQGVLSATILYEILLGKA TLYAVLVSAVLMLAMVKKRDF
1066	9117	A	2012	3	762	TLRGAVLRGAAGRLGGGLLVLAGRAM GLSAVGRTRAESGTAERAAPVFLGLQA VSTDTQMFGPGTRLTVLEDLKNVFPPEV AVFEPSEAEISHTQKATLVCLATGFDP HVELSWVNGKEVHSGVSTDPQPLKEQ PALNDSRYCLSSRLRVSAFWQNPNNHF RCQVQFYGLSENDEWTQDRAKPVTOIV SAEAWGRADFGFTSVKSYQQGVLSATI LYEILLGKATLYAVLVSAVLMLAMVKKR KDSRG
1067	9118	A	2013	1	1010	RYSFKAVMGIRLLCRVAFCLAVGLVD VKVTQSSRYLVKRTGEKVLECVQDMD HENMFYQQRQDPLGLRLIYFSYDVKM KEKGDIPGYSVSREKKERFSLILESAST NQTSMYLCASSLFNSGYQETQYFGVGT RLLVLEDLKNVFPPEVAVFEPSEAEISHT QKATLVCLATGFDPHVELSWVNGKE VHSGVSTDPQPLKEQPALNDSRYCLSSR LRVSATFWQNPNNHFRQVQFYGLSGN DEWTQDRAKPVTOIVSAEAWGRADCGF TSVSYQQGVLSATILYEILARGRPTLYC

					LCW*APLVLMAMVKEKGFLKAALEVE LGAF
1068	9119	A	2014	344	463
1069	9120	A	2015	1075	2102
					QKPGQPLFLGSISPKKSFKTRKQKSSSK AEYNLTACKCLLCKRKYSSQIMLKRM QI/RPQDNSFWNKL*KRKR**YCQQFRN KS*S*TSRFCRIFTPFHYPFSTE/CN*REQII QMKKRTHRQHRKIKLNKTLK/CPKSTSP SAAGGQKTRKPKLSAGDFKQLYCKL CKRQFTSKQNLTKHIELHTDGNNIYVKF YKCPLECTYETRRKRDVIRHITVVKHKKSS RYLGKITASLEIRAIIKKPIDFVLNKVAKR GPSRDEAKHSDSKHDGTSNSPSKKYEVA DVGIEVKVTKNFSLHRCNCKGKAFKAKK TYLEHHKKTHKANASNSPEGNKTKGRS TRSKALV
1070	9121	A	2018	1	408
					SNPRVRGGGTHRSGQAFANMCRGGR MFAPT/KTWRRWHRRVNTTQKRYAICS ALAASALPALVMSKGHRIEEVPPLVV EDKVEGYKKTKEAVLLLKKLKAWNDIK KVYASQRMRAGKGKK/RCGR*ERKEGC CWC
1071	9122	A	2019	28	1437
					EERGCSLPLACARPLUSVYSEKGESSG KNVTLPVAVFKAPIRPDVELCSNPRLRK NNRQPYAVSEL\AGHQTK\AE\SWGTGRA GGSKFPEVRGGGTHRS\GQAFGWMCR GGRMFAPTKTLGRRWNRRVNTTP/QK RYAICS\ALA\ASALTSNWVMSK\GHRIEE VPELPLVVEDKVEGYKKTKEAVLLL KKLKAWNDIKKVYASQRLRA\SKGKM RNRRRIPGAGGPCIIYNEDNGNIKAFRNIP GNYSA*M*AKNLK\LA\PG\GHGGARFCT WTEKCFSGKL\DELYGTWR*S/RASPQRS NYHSFPLHKMINTDLSRILEKPQRSQRA PPGHAKKIHR\RVLKKNPTEKTLR\UML KLKPHMQKTHAAGTTHSSPRPRNHK\LR VVDKGKLLHQRHLQAKSDEKAAVAGKK PAVGKKGKKAPVGVKKIQKKPLVGKK\ AAATK\KPAPEKKPAEKKP\TTEEKKPAA
1072	9123	A	202	80	518
					VGPLTPNSVLPRGSV/LPTEVGLDALGEG LKGLCGPNPVVETTNGGFPKQGVLT GRVR*ET*DQSTQDSASCYSTCPAAQTA AYCSE/ASSVPRKIKRLQNMLNFWPRE* RRLRRSARNKLRRDADFPLCELLLSLN PVRNKIF
1073	9124	A	2020	1	2196
1074	9125	A	2021	1	207
1075	9126	A	2022	1	1062
1076	9127	A	2023	171	476
					LPRFQTLRNTETEDHSCCCSGRRRFAAA VASRSQ*GNPASLAGSSTTGARSCAPVA RTQRCPRCAACGCWRRWTRWICSAKG WFAHSQFSARIDWLQFLEW
1077	9128	A	2024	1	781

1078	9129	B	2025	1	1602	MGYRARI RNHVWLATQNHSTLVTERSA VPFLPVNPEYSATRNQGRQKLGRFNARE FGNLIIDILSESKRRQQARAEQPHSAAAA DGVTFSPVPTPHTRHSYAMHMLYAGIP LKVLQSLMGHKSISSTEYVTKVFALDVA ARHRQPTRRKAPAVLGQCRAIATRERPG WFHVAEVRASRRGRSPTPCADPGWASI SRGVLVCDECCSVHRSLSGRHSIVKHLR HSAWPPTLLQSGFGPSRRAAPRAARGP TPRTEEA WAAMALTFLLVLLTLATLCT RLHRNFRRGESIWGPTADSQDTVAGSP DHGLLAFAYHRLVRLLWVLCPGWAFF LVNSSRGGVFNPIHPCRHGQARFAGV GRAEDVTFLYHPCAH PWLKLQALLAY ACMANPSLTPDFSLTQDRVDIEQLDPRG RTPHLATTLGHLECARVLLAHGETWA RENRS GWTVLQEA VSTQDLELVQLVLR YRDYQRVVKRLASIPVLEKLRKQRSYL PGRPLARLRRSVNSSGAVGMKSES MGR WVFGP*
1079	9130	A	2026	2	692	ENRSGFQSRRIYSISKQKKLTFFDVKD NT*SWNAVASREECYLG VIT*SRTLSGRS *TKDRLRRT*SMPCYSDSM/ISMQELEFR HLNTIQKMRCELIRLQHQTETLNQLEYN KRRERELRRKHVMEVRQQPKGLKSKEL PNKKSSFQGYLQNSQTRQYKALRNHLE TTPKSEHKAVLKR LKEEQTRKLAILAEQ YDHSINEMLSTQAVSLLFLGQNKFSAPFL PPPE
1080	9131	A	2027	1	2933	MDDIPQEARQYRHNQAYAYS IQGDGAE DDDERIVRFHTRVINHKKRKNSPRIVQSN DLTEAAYSLSRDQKRMLYLFVDQIRKSD GTLQEH DGICEIHVAKYAEIFGLTSAEAS KDIRQALKSFAGKEVVFYRPEEDAGDEK GYESFPWFIKRAHSPSRGLYSVHINPYLIP FFIGLQNRFTQFRLSETKEITNPYAMRLY ESLCQYRKPDGSGIVSLKIDWIERYQLP QSYQRM P D FRRRFLQHIFVLRERPET
1081	9132	A	2028	6994	7054	LISTSDLYFL*DL*VRCKQTGVLPWFHTT TIPRSSLEV N P R F P T Y H L C E L / S A S Y L T S W YLSFLIWTMG*LLHLHHTELL*G*SNKSC *VLCMEPD TVTAHSAVCTQFW/SNVDKN NNVISLRKSFLFF*QSFALVTOAGVQWR DLGSLQAPPPGFTPFSCSLPSSWDYRRP LPRPANFLYF**RQGF PETGFHHVHVHG QADLELLTSGDPPTLASQSA GUTGVSHH VQPEGEGFCNCCC VVESGPFKERVG
1082	9133	A	2029	411	713	TNSLYGLNIYLEIDQHFRNMKIYRSNSLI LILILLHLYCIFALSDL/CSH*PQVAI*KEIN WPGAVAHTCNPSTLGNRGRWIV*GQEFE TSLVNMAKARLY
1083	9134	A	203	63	552	
1084	9135	A	2030	3	84	SGSTHASGGLQASRWRRAGTSRCSVSSL TSTSTASLRGLPTVATGLRSGSWTSHHG VAG*GRPTRPVGSRRRDGGERVRVGAL CQA
1085	9136	A	2031	3	519	SRWRRAGTSRCSVSSLTSTSTASLRGLPT VATGDYPPPDQASSNLTSPPPGHTHCG NRGQPWPVLGRGGANAAASSSRPEQG GG/SSFARLSTHGTGPGGEGVKAVSSA *GPAGGLPGTLNLVGGGDVTDASLSALT GGLEGILEKP*AGRC PITDGNPREEGREP RAG

1086	9137	A	2036	247	1294	MPNTAMKEKRCLLMGERSGSGKNQAM/ RSIIFAKLPFARDTRRLGATIDVEHSHVR FLAGNLVLNLWDCGGQDTFMENYFTSQR VDNIFRNVGSFDFKVFDVESRELAEKDMH/ YYQSCLEGHPPRTLPDAK/FCLAVHKMD/ LLVQEDQRDLIFKEREEDLRRLSRPLEC ACFRTSIWG*GRFYKAWVQAFVYQLD FPNVSAAGRLNLRDFAQIIEAD/EVLLFE RSVTFLVISHY/QCKEQRDVHRFEKISNIN KIQFKLSCSKLPASFQSMVRNSNFAVA FMRHLFT*NTYVMVVMSSDPVDPFLGPL LINHSQCPGNHFEETGRELNGPQATVFP YGVEYCNALSEKA
1087	9138	A	2038	311	458	
1088	9139	A	2039	1271	1540	
1089	9140	A	204	1	69	SGVKNGRGYVVGISGGTTNKVSP*SRVS *PMAVSACY*VKNGRGYVVGISGGTTN KVSP
1090	9141	A	2040	176	552	MRSSKQMKPNFPRCSSITVLSVRGMVLF LTACPRFKMSSRTDFRFGNPQVT*GSTI CSIFRLPSILSMRTTK/DQGMFIWQFQGM RFHF*SSETHLVTFLLPPGIM*E*FQSLKPE PFSFLLSCYCH
1091	9142	A	2041	204	401	WHEFTGAENHCKTLPKENF*WCLCKSH PSEPKNAAYNRTLCDLGISKSEVSLGTSE EMWTSQGQE
1092	9143	A	2042	123	311	PSRRLLGHPRWALSPHLLLPQRFCSWVS FAPASCP/DLFISSDRSSSVVGLMKHRM LGLAELL
1093	9144	A	2043	2459	3030	TSPSTSLRPAIPSPSPSSRPPSSSQTTSA SSPSSAWPKAASRQGA*RCRE*LPSWTS QSSPPLKSWGLDSAPPPPLSTCLSASTTR GAGAAATPQCSAPCLHR/CDKVPGFAVA QCTNHSSPSLPHSRHPPAGAPAAAGA PATATLEAPARPPPPQPRVQQSGVAGK DADECSACRRPTVMAATGF
1094	9145	A	2044	1125	1695	DFFSKIDDSHLQVLFFENQLLILFFPHFLN DCSNSFLFFFSEMSRSVAQLECTG/AILA HCNLRLLGSSDFPALASRVAGTTGTCHH TQLIFVLVETGFHHVQAGTCMQSQLI KGLRENHLNPGGGGCNEPRSRPLRSSLG NRVRLSQREKQNP*DAQVSEKGLNTLEL QAKF*GVSHVFPGER/VSLISQNP*PFWK KVIKQVSRLRFKKPQDPFRASQSLRIFQS HH*KSWNTYSQQRQVILLFLCLSSYVYFK SFSKQGPRTLQIQLCPWAWSTCCRSRE PCTNARVTHLPTLNRIEDATKQDSFLH GMVPIVRQGGHRM*ENAGEFFPWELGL WMRGCFAGHTIRLLSFL*PFLSSF*R*SR K*SSKMLDKNSQNNKTHASTSLIKNLP HLAPKSMATATKSNFKELRFLQQRN*FT SSSP/CLKISY*YYSSLISI*MTAAIVFC/C FSEMSRSVA/QAGVHWCNLGSLQSLPP GFKRFSCLSLSSWDYRHAPPHPAHFCIF SRDRVSPCWPGWSQSPGPHGLPAWASP KCWDYSREPPRPGQQYSFSVTRTSLSPIT LRLCIAPCPNQAFTDPSRVLHLFVPASSIP PNLKVTLY
1095	9146	A	2045	1	577	PLKRSDCGNDGRPTRPPTRPDTTVFTSNL KQTRMVHLTPEEKSAVTALWGKVNVD WGGKALGRLLVVYPWTQRFVFSFGDL STPDVAMGNPKVKAHGKKVLRGAFS DLAHL/DNLKGTFAHTEVSLHC*QACTW DPGELQGSWGNVLVCVAGPITFGKRIST PPVAGLPNQENWLAWCWLNALGPQVIT
1096	9147	A	2046	16	370	
1097	9148	A	2047	1	1125	

1098	9149	A	2048	1	1941	MWKHLWNWVIGSGWKTLDVLEEDRKT KENLVLLRDFSSGCDQSIDRNMDESEVQA DEFSDRNEEVIGNWSKGQPCYTLAKDLS ALCPYPKALWKVELKSDDLGEIPLELQR LVHGGQVNLDMEDHQDQEYIKPRLRFK AFSGEGQKLGSLTPEIVSTPSSPEEEDKSI LNAVVLIDDSVPTTKIQIRLADGSRLIQRF NSTHRRRAVNGPSNQLPDKPGSPSPFCL APLITVCPAADDPSPALWLHLVAARSTS QRNGQVLCYLPRKWGAVAVCTSVEACC WVFWLLERQNDSGMQLGGPPPSAIFRW LAAPAADAPAATSGAGCLATAGGAKTR KLALAELEYDEVKCKSSKSNRPKATVFK SPRTPPQRTVKNWFQLIAPNAGEDAEQQ ELAFIAGGTAKWYSHFGRPFGNLLQRAT WNVSRKLLRRTTQISGSLRYWGFFGFQAK VAATLAKQEVIPPYLSLGRGAEFKGLSQ NSLQAPLHGTSQGKKNDYPETA VLPKLP REKVSRRERKLASSRCLSLGTKCMSEEA FLVITNSSSCSCEGGFPYLIAGKYAQDFG LVEEACFPYTGTDSPCKMKEDCFRYYSS EYHYVGFGYGGCNEALMKLELVHHGP MAVAFEVYDDFLHYKKGIYHHTGLRD PFHPFEL
1099	9150	A	2049	1	2077	MTYPENIQIKKITGVQWMVPLKYKEEGS KVTTYCNETMTGWVHDLGRNWACFT GKKVGTASENVYVNIHLKNSQEKYSN RLYKYDHNFKAINAIQKSWTATTYME YETLTLDGMIRRSRGHSRKIPSSVPLCSS APLDVQLLVSPAKILGLYGGRMGMA GQKAPFLRAPVIGVSFADSFQPSRLQDSP QLFNQQLLSAAQVGSSGSQRDVNCSV MGPQEKKVVVYLQKLDATYDDLGNNGV HFTIYNQGFIVLNDLQVGLPFFKYKEG GAARVTTCNETMTGWGA*CVWGRN WAICFTGKKVGTASENVYVNTAHLKN SQEKYSNRRLYKYDHNFKAINAIQKSL TATTYMEYETLTLDGMIRRKWWATSR KIPRPKPAPLTAEYSQKI/LLHLPTSWDW RNVHGINFVSPVRNQASCGSCYASFIAS MGMLE/ARGIRILTNNSTPILSPQEVVSC ISQYIAQGCEGGFPYLIAGKYAQDFGLV EEACFPYTGTDSPCKMKEDCFRYYSSSEY HYVGFGFYGGCNEALMKLELVHPWGP WEVCFLEVYDDFLHYKKGDPTPHTGLK RPFSTPFELTNHAVLLVGYGT*LKPLG MEYWIVKNKLGAPAWGLRNGYFRIPR GTDECAIESIAVAATPQFLNFRGRLPISFI NGSASSCKGGIGIFTDCRLSTSIFRSLQID FP
1100	9151	A	205	379	540	IKKVRNLGPKHPRFSVLLLVHSCSTNGG VLL*RSSVPRKIKKRLQNMNFWPRE
1101	9152	B	2050	59	466	MSAAMRERFDRFLHEKNCMTDLLAKLE AKTGVNRSFIALGVIGLVALYLVWLPSL HLCGFLWCMAPSPSNGAELLYKRIIRPF FLKHESQMDSVVKDLKDKAKETADAIT KEAKKATVNLLX*
1102	9153	A	2051	1	915	
1103	9154	A	2052	1	3180	FRAAVAAPVYPALGTAPGGETVPEMTA AMRERFERILHDKNCMTDLLAKLEAKT GVNRSFIALGVIGLEALYLVFGYGASLL CNLIGFGYPAYISIKAIESPKNEDDTQWL ITYWVVVYGVSFHC*NSFSDIFLSWFPF* LHG*KCGFLVGWCMAPPELLNGG*NCS KRRIIRSFSFPGSTKSQIGQVLVKDP*RPR PKETADANH*KKPKKSLP*ILLG*KKKKK GGR
1104	9155	B	2053	171	256	XVDPASSQAMELSDVTLIEGVGNEVMV VAX*

1105	9156	A	2054	187	437	PWS*LGSLPT*QTAVQPAPGRYCVSRRI RPPPGACGPPGGTANGNPEPTELPHPSEG NDEKAEAEAGEGRGDSTWGGWSWGW
1106	9157	A	2055	2	165	NQHHTLPPSPHYHPQ*G*HQRAPWP GCWQGPRCRNKGGQHQAEPGLQPGL
1107	9158	A	2056	1	506	SPASQCHHYPLMMGSSVVRGAFGLPP VGPHAPGVGRMCRLLTQ*RPAGACYRC LLRR*RAKLGPRLESAPPHLPPSPHYPH PQ*G*HQRAPWPGCWQGPRTAR*GGV PHPFSEAKVPLLDGPIPSALDWGPWAHP NRRAAWPQPP**DQLSRPVRSRVG*GGH KP
1108	9159	A	2057	496	1092	QPAPGQLLCHLATHP/PPPGACGPPGAG QGKPEPTELPHPSEGNDEKAEAEAGEGRG DSTGEAGAGGGVEP/RP*ASP*HPRPAQK TSRCRQQSRGPPEI*G*HLPPSQWPHH CAAQIPQ*YRGAGCG*ARGYRGCPPEQI LPWTRKPDETDLPGPATRPSHTAFSEH YRQLCDSLPLTPRVSCSRPLSLLGPLGH
1109	9160	A	2058	155	701	PGLFRRGLPHPGTGPVQSPFNFP*/PPR/GP EAPP/RSPAPPSRLRGVDGL*PP*PTLLT GRDNWSY/PEAGARQPFSGGPMDPSPA PRE*DHPKAEPSPQKKGAGPLLTVRSRY GQGRSQAEGQSKDP*GRTPGVLPGPSR EFPVSVPIVFVFLCRRFFSCKSWIMTLTFL PSGVSCGCDK
1110	9161	A	2059	1	506	DRDAEFYKFLQENDQSQLNFSDDSSEE EEESFHSPLPYVLEEAFAAAVATT/RGD QESAEANKFQVTDSAVFNALVVFNALV TFCIRDLTGCLQKLLIGKVAKDSSRMLQ PSSSLLWGKLRVDIKAYLGSVIQLVSCV AETVVLAAVLWHISVLVPCFLTFFPKQCS RE
1111	9162	A	206	287	449	IKKVRNLGPKHPRFSVLLHVSCSTNGG VLL*RSSVPRKIKKRLQNMLNFWPRE
1112	9163	A	2060	9	2295	VGCTLRVGVMAAAGSRKRRLAELTVDE FLASGFDSESESESENSPQATREAREAA RSPDKPGGSPASRRKGRASEHKDQLSR LKDRDPEFYKFLQENDQSLNFSDDSSE EEEGPFHSLPDVLEEAEEEDGAEEGEDG DRVPRGLKGKNSVPVTVAMVERWKQ AAKQRLTPKLFHEVVQAFQAAVATTRG DQESAEANKFQVTDAAFNALVTFCIRD LIGCLQKLLFGKVAKDSSRMLQPSSSPL WGKLRVDIKAYLGSAILMSCLSETTVL AAVLRHISVLV*FLTFPKQCHMLLKRM VVVWSTGEESLRVLAFLVLSRVCRRHK DTFLGPVLKQMYITYVRNCKFTSPGALP FISFMQWTLTELLALEPGVAYQHAFLYI RQLAIHLRNAMTTRKKETYQSVYNWQY VHCLFLWCRVLSTAGPSEALQPLVYPLA QVIIGCIKLIPTARFYPLRMHCIRALTLS GSSGAFIPVLPFILÆMFQQVDFNRKPGR MSSKPINFSVILKLSNVNLQEKAYRGGL GWSSCYDLNPGSYLHSAHCIGFPELV PVVLQLKSFLRECKVANYCRQVQQLG KVQENSAYICSRQRVSFGVSEQQAVEA WEKLTREEGTPLTYSHWRKLRDREIQ LEISGKERLEDLNFPEIKRRKMADRKDE DRKQFKDLFDLNSSEEDDETEGFSENGIL RPLSTRHGVEDDEDEEEGEDSSNSD GPDPAEAGLAPGELQQLAQGPEDLEDL QLSEDD

1113	9164	A	2061	203	1383	MSSFGYRTLTVLFTLACCPGASDEKVF EVHVRPKEAGRLSPKGSLEVNCSTTC NQP*SGVGLGDLSD*GFCWDEQVQLGN NYLGLKHFPIDTVLQCHFTLASGKQESM NSNVSVYQPPRQVILTLQPTLVAVGKS FTIECRVPTVEPLDSLTLFLFRGNEILA LWRTFRGRAAPAPQGGPQPHSNSTADR RGLAHRKLSPLAVLDLMSVRGGNIFHK HSAPKMLEIYETCVRTSPDWSSLVTGG VGVACPLFVTSVLLCFIFGQHLRPASG MGTYGVRAAWRRLPQAFRPIATHGVA WPHTTVVTGTQCDSSGLRYQPWLKDCD RQORLGTLPFLARIQTPGLSPVTVSPPGI TMAREGSHHGGLSLDASLPTLSFTGWH EA
1114	9165	A	2062	503	1808	TTVQEESTVDSQVPVNIHLLTNIGRTGV SPGDVSDSATSDSTKSKGSWGSGKDQYS RELLVSSIFAAASRKRKKPKEKAQPSSSE DELDNVFFKKENVEQCHNDTKEESKKES ETLGRKQKIIAKENSTRKDPSTTKDEKIS LGKESTPSEEPSPPHNSKHNSPTLSCR AILKESPRSLAQKSSHLEETGSDSGTLL STSSQASLARFSMKKSTSPETKHSEFLAN VSTITSDYSTTSSATYLA*PGLQSTEP*GA VSAESKGDEADDERSELISEGRPVETDS ESEFPVFPTSLDFREAFPRKTARSTKSSR RNSEGESELCTEGSLTSSLDSRRQLFSSH KLIECDTLRKKKSARFKSDSGSLGDAKN EKEAPSLTKVFDVMKKGKSTGSLTPTTR GESEKQEPTWTKIADRLKLRPRAPADD MYE
1115	9166	A	2063	2	527	DPEADSIRAEMSRVALAVLALLSLSGLE AIQRTPKIQVYSRHPAENGKSNFLNCYV SGFHPSDIEVCLLNGKRIEKVEHSDLS FSKDWFSYLLPYTEFHPQLKKDEYALP V*THVTLSPAQR*FKWDRGHVKQHGG LKMPHLGWNDKFLACFFNIDMLITLT LLCTKM
1116	9167	A	2064	3	163	
1117	9168	A	2065	611	1432	TPLHLAVITNQPEIAEALLGAGCDPELRD FRGNTPLHLACEQGCLASVGLTQSCCT PHLHSILKATNYN/GYVCLPALPHPLGGQ VTWRRGRWANLRSPGKSLNS*HLEG*E NMCACKLLDAFIKFFQNPDCGFLKFR* DYLPHKRIGERSEG*NRWVYFFPVLPG HTCLHLASIHGYLGIVELLVSLGADVNA/ QGWCFLLPPTH*VRLVLML*AEIPNAIS ISNSFWFQEPNCNGRTALYLAVDLNPNL VSLLLKCGADVNRVTYQGYSP
1118	9169	A	2066	1	1332	MVQLSPHYRGDSEDGRKRMVRQRTKPV LFFWSDWLGNSPSLTPPQRNPQAFIGRR GGAAEPTAVRAAVPPASAPARKQRAAR GPAHPQQRPLVRAMFQAAERPQEWA MEGPRDGLKKERLLDRHDSGLDSMKD EEYEQMVKELQEIRLEPQEVPRGSEPWK QQLTEDGDSFLHLAIHHEEKALTMEVIRQ VKGDLAFLNFKTNLQQTPLHLAVITNQ PEIVEALLGAGCDLELRDFRGNTPL*SL ACEQGCLASVGLDSSLAPPPQLHSILK GYPTTMGHTCLHLAFYPMGYWGHRSF LVFLGVLDVKCSRSPCKWPGLPIHLAVD LQNPEPGCSLLFESVGADVQQSLPTQGY SPPTQPHPGPPQAPRIQQQLGQLTLENL QMLPRE/SPDEESYDTRVQSSTGVSPED LAPMDDCGVFGGPRSDVMSAKGLKET
1119	9170	B	2067	169	251	XPQKEPYVIPFTGCVTQKGQVAGDAGW Q*
1120	9171	A	2068	33	445	
1121	9172	A	2069	1	1428	

1122	9173	A	207	263	525	IKKVRNLGPKHPRFSVLLLHVSCSTNGG VLL*RSSVPKKNKEEAAEYAKLLAKRM KEAKEKRQEIQAKRRRLSSLRSTFKSES SQK
1123	9174	A	2070	1268	2807	LPLESLAVQVKQHIDAVARFTGIKNCYF GFGGMSTQKPARGC*TRRPEIVVATPGR LWELIKEKHYYHL\GNLRQ\LRCL\VVDEA\ DRMVAEKGPFWLELLHSCFRDASNDSIQ YNPKRTKRLFFLATLTLVHQAPARNPFH K\KHTKKMDYTAQL\DLLMQKIGHEGAS PKVIDLTRE*GPRWETLTETKIPL*DLIEK DFLLVTTFLMQYSRAAA*CFANSIS\CIKR LISGLLKV\LLDIMALGPWHGLVWHQEG RGLRNLGSILPRL\EDCVLLAATDVGSSGV WDIPKV\QHVHPFTRVPRTSEIYVHRSW SNLLRSYQLTGLKS*LLIWGLKDVINFKK IYKTLKKDEDIPLFPADINTWDVV\KERI R\LARQNEESEY\RNFOACLHNSWIEQA AAAL\IEI\AEEDMY*GEGKADQOEERR RQKQMKVLKKELRHLLSQPLFTESQKTK YPTQSGKPPLLVLAPSKERVCLSLCSQ GRKEEGRTKEARGGPQPGTATAKLQVQ FNCPGQVCQ
1124	9175	A	2074	1	408	SNPRVRGGGTHRSQGAFANMCRGGR MFAPT/KTWRRWHRRVNTTQKRYAICS ALAASALPALVMSKGHRIEEVPELPLVY EDKVEGYKKTKEAVLLLKKLKA\NDIK KVYASQMRAGKGKK/RCGR*ERKEGC CWC
1125	9176	A	2075	3	1434	FPVAAAGLRGAWLSPLSAMACARPL\IS VYSEKGESSGKNVTLPVFKAP\RPDIV NFVHTNLRKNNRQPYAVSELA\GHQTK\ AESWGTGRAGGSKFPEVRGGGTHRSIG QGAFGNMCRGGRMFAPTQNLGRRWN VRRVDT\TQNR\YAICS\ALA\ASALTSNW VMSK\GHRIEEVPELPLVVEDKVEGLQE EPRKL\LLLKKL\KA\W\NDIKKVYASRR MRGGQRQNGETVRRIPGAGGPCIYNED NGINKPFRNIPGN\YSA*M*AKLNILEALL PGVGHGGTFLA\FT*KL\PRK\LD\EL\YGT WR*S/RASPQRSNYHSFPLHKM\INTDLS RNLEK\QRSQ\RAPPGH\RGKREDPIRRVL KKNP\KLNLR\IML\KLN\PICKGPCCR/RHPF FAQAQESQSSGV\DKGKLLHQRHLQAKS DEKAAVAGKQP\VGK\TGKKGCLLVFK NQKKPLV\GKK\AAATKKPAPER\SLQRR NATTEKKPAA
1126	9177	A	2076	275	652	TVNLCFSTFLWTVLYFTFFFAKCFQIHL RIYLR**LKT\TNSWFMLYAUMHVLLVQG QN*NKIFSVKQIYLLCTFIYTGIFW*YHT KG*NKTFTM*NSMYIFGYLHTLKPKGKI KRKHLFATTIC
1127	9178	A	2077	63	290	GGILLSISRPYKTKPTHGIGKYKHLIKAEE PKKKKGKVAVRAINLGT\DYNYGVLNIH LTAYDMTLAESYAQYVHN
1128	9179	A	2078	315	1092	RPRSSKRMSGTSEKVLCLRNNTIFKQAFS LLRFR\TSGEKPIYSVGGILLSISRPYKSKP THGIGKYKHLIKAEEP\KKKGKVEVRAI NLGTDY\EYGV\LN\HLTA\YDMTLAESYA PLFSTTF\CNLSH*KSEESYAMPTQNHKK WLPVCRDQ\GQPKCLLGLKCLP\THEARV VQISGLSATFARKFSWKIIPKVP\LP*RESG LFS*REHTERKTSRGRFQRFDP\ELGRTFW AKFEVATVDPFHCQ\QWSYLSAKEKSL GS
1129	9180	A	208	68	280	
1130	9181	A	2080	61	346	LSLFFETEF\CS\CPGLECSGVILAH\CNFR\ LPGFK*F\SCLSLPSSWVYRYPPDPANFL VLVETGFHHVGPGLV\NDPLIF\NLDTCY

						SAKRQFLE
1131	9182	A	2081	88	386	PHRFGKRRNKTHTLCRRCSWKAYHLQ KSTCGKCGYP AKRRKYNWSAKAKRP KYHPEPGRMRHLKIVYRRIQGMGFREG TTP*TOEGQAVASIQVHL
1132	9183	A	2082	187	913	STNKRSTRPPLGFEMASPHQEPKPGDLIE IFRLGYEHWALYIGDGYVIHLAPPSEYP GAGSSGVFSVLSNSAEVKRGRLAEDVV GGCCYRGQQTAWDHGVSPRALEG*SF SSAKEMVWFRRLKIVSIVSRNCEALCSP SLRYGQVPAVKQVGKPRFEVG/VLATA LGILVVAGCSFAIRRYQKKS DSLKQPQN PVLEAAVGVPVEMSLPRCLQQPDPRALS QAFSRSFPLFPSLAGKSMI
1133	9184	A	2083	1	423	
1134	9185	A	2084	2	390	PRVRYRGVITDPQPLMEQPGLGDSRYWL SSRLRVSATFWQNP RNHFRCQVQFYGLS ENDEWTHDRAKPVTOIVSAEAWSKADC GFTSGN*QQGVLSATILYEILLGKATLYA VLVSALVLMGMVVKRKDF
1135	9186	A	2085	2	1027	HLPDAAMGPQLLGYVVLCLLGAGPLEA QVTQNPRLITVTDKGDVPEGYKVS RKE KRNFP LILES PPNQTS LYFCARSFEQGY EQYFGPGTRLT VTEKRNFP LILES PPNQ TS LYFCASSSSQGR LSPGFNYGYTFGSGT RLTVVEDLNKLPPEVAVFEPSEAEISHT QKATLVCLATGUFDPHVELSWVWGKE AHSGVSTD PQPLKEQPALNDSRYCLSSR LRVSATFWQNP RNHFRCQVQFYGLSEN DEWTQDRAKPVTOIVSAEAWGRADCGF TSWKS YQQGVLSATILYEILARGRTLY CLCW*APLVLMAMVKEKGFLKAAL EV ELGAY
1136	9187	A	2086	1921	1991	SFVIFDANIFFQFIG*SLLSLWM*ALLCLL VTEHLYLV SIGHLWCVCVCVCVCVCVY DFLIPSHFSIDCFAKAIYILRILIFVIFDAN IFFQFIGCLLILCFR
1137	9188	C	2087	105	392	
1138	9189	A	2088	38	230	LYWQKRKGKLLNNLTQGIVADPVR*KK FHFCKPSNCPKIHNTESAYAVSFMKYSA HVLGSLYEM
1139	9190	A	2089	487	747	
1140	9191	A	209	465	1444	KKGEKDYSWTDLILTVSPPPGPQKELARI GQTFPISLKKMMSASML*ESPLNKG*E T*GPKAPKIQRLVTPCSSSPNGGRIALK KQRT/TRKIKKRLQNMLNFWPRE*RRLR RSARNKLRRDADFPLCELLLWPCPPAT E
1141	9192	A	2090	1	1350	
1142	9193	C	2091	179	649	MFLLVGAPKANTTQPGIVEGGQVLKCD WSSTRRCQIEFDAT ELHRELKENQNHS YSLKSSASFNVIEFPYKNLP IEDITNSTLV TTNVTWGIQPA PMPVPVWV IILAVLAGL LLAVLVFVMYRMGFFKVRPPQEEQE REQLQPHENGEGNSET*
1143	9194	A	2092	274	423	
1144	9195	A	2093	1	3849	MCGGVFATEELAVSAGLKRKMCSVVEK RHGDFQVELLLDKLKQGAIRRALFLYS RSPSHSKNMTISRGGMLMQCEELIAYLRD ESEFRDKLTPITIFMEYRLDYRTAADTTG LQPILNQFTPANISRQSGFVLLTCS DQKKI YIGDDNPLTLIVKAQNGEGAYEAEIIVS IPLQADFIGVVRNNEALARLSCAFKTEN QTRQVVC DLGNPMKAGTQHLLSPTQF SMQVFLFHYTASSSVVALDSHRSKPYCV N

1145	9196	A	2094	1126	2034	RCWRPRTLGFASPPTRPCSPHAPGCEM TPRDWHRVLSFASPLRIEIEIFQGYDKTFG LKNKKGAKQQKFIKAVTHQVKFGQ/SKS TSGSTE*SWKRKLKDDKKELQELNEL FKPVVAAQKI/RVKGADPKSVVCAFFKQ GQCTKGDKCKFSHDLTLGEKMEKRSVY IDARDEELEKETKSSLIQADTMDNWDEK KLEEVVNKKHGEAEKKKPKTQIVCKHFL EAIENNKYGWFWVCPGGGIDICMYRHAL PPGFVLKKDKKKEEKEDEISLEDLIERER SALGPNVTKITLESFLAWKKRKRQV
1146	9197	A	2095	1	213	
1147	9198	A	2096	2	170	
1148	9199	A	2097	3	764	PAVVCGRRLISVLEQIRHFVMMPEINTN HLDKQQVQLLAEMCILIDENDNKIGAET KKNCHLNENIEKGLLHRAFSVFLFNTEN KLLLQQRSDAKVTFPG/LVLRNTCCSHP LRQSSRALRES DALGS*/GARQHRGRLES LSLGIPLEEVPEEVLII*HRIHYKAQSDGI WGGHEIDYILWWRKNVTNLNPDNEIKS YCYVSKEELKELLKAASGEIKITPWFKI IAATFLFKWWDNLNHLNQFVDHEKIYR M
1149	9200	A	2098	1	299	GIPDQEVIGTGYGILDQKASGVKYTKS/D FRSPRPDDLSSFQL*VTSHWDLRLIEVTE TICKRLLNIACTRRGPAAIDLPRACQRPL RHYTTWYTKGSRW
1150	9201	A	2099	1	631	MDSMPEPASRCLLLPLLLLLLLLLLPAPE LGPSQAGAEENDWVRLPSKCEVCKYVA VELKSAFEETGKTKEVIGTGYGILDQKAS GVKYTKSDLRLIEVTETICKRLLNIACTR RGPAAILDPRLD SGLSFIRSGVRPACILVC LLVHRQKCSTVAAPVGT*RH*NGENSAR STMCRKVG*ARCQRTPRACQRPLRHY TTWYTKGSRW
1151	9202	A	21	918	1872	AEKGPPSPGVPSTCLANSPPPSAGSAAV PHSAPPGAAPRRSSRQRPCSPRRCWQEG AGVRAGQDGLGGSATRSAAQQSHQRQT GP/EGSTGKAKARGSTGRKR*AMGGSAA GDGA/PHVLGTGQPRAPPSTGDGARAG NWLAAQSAPTHRRWSTCWEPASPLPA SSNCCTHTWTRNCPGTAPSGTALPGLPG RPAPHPEPPPPMPPPP/PPRGL/PLGSCVF L*VERPIWREVLSPAPPRACVDTSGHEI ASGPSVPVAGTEPSRPWLKQPLCPPQQP RSWLTRPE/AELHMPPTPLPAYLPGSIG VPQSHS*PPATLLR
1152	9203	A	210	87	904	GGWVAPETPSDPWFPVQRGVGDASVPG IGKNVVCEKAATSVDAFRMVTASRYYP QLMSLVGNVLRFLPAFVRMKQLISEHYV GAVMICDARIYSGSLLSPSYGWFCDEL MGGGGLHTMGTYILDLLTHLTGRRAEK VHGLLKTFRQNAAIRGIRHVTSDDFCF FQMLMGGGVCSTVTNLFNMPGAFVHEV MVDVPLL YLKGVMVMVQALRQSFQGG GDRRTWDRTPVSMAASFEDGLYMQSVV DAIKRSSRSGEWEAVEVLTEEPDTNQNL
1153	9204	A	2100	171	825	RANPTKPIGCAVRGPWSALKAGCGCQR RAGGRLAVVVVARRHVCSPGSGEGKLL RARPREEEPPGLGSGPGRAMDSMPEPA SRCLLLPLLLLLLLLLLPAPELGPSQAGA EENDWVRLPSKCEVCKYVAVELKSAFE ETGKTKEVIGTGYGILDQKASGVKYTKS DLRLIEVTETICKRLLNIACTRRGPAAIDL PRACQRPLRHYTTWYTKGSRW

1154	9205	A	2101	2	527	PGRAMDSMPEPASRCLLLLPLLLVMLVL LPAPELGPSQAGTDENDWVRLPSKCEVC KYVAVELKSAFEETGKTKEVIGTGYGIL DQKASGVKYTKSISDPDQDDLSSFQL* VTSHWDLRLIEVTETICKRLLMIACRRG PAAIDLAKVGFIVLHPLWGPGLQCNLS VSAGL
1155	9206	A	2102	3	1203	SSAAEAMRVLVRRCWGPPLAHGARRGR PSPQWRALARLGWEDCRDSRVREKPPW RVLFFGTDQFAREALRALHAARENKEEE LIDKLEVVTMPSPSPKGLPVKQYAVQSQ LPVYEWPDVGSGEYDVGVVASFGRLN EALILKFPYGILNVHPSCLPRWRGPAPVI HTVLHGDVTGVTIMQIRPKRFDVGPIL KQETVPVPPKSTAKGIGKAVLFKDWGA NMLISVLEKFGLESLSNGRQQPMEGAT YAPKISAGTSCIKWEEQTFEQKFRLYRAI GNIIPQLTLWMANTIKLLDLVEVNSSVLA DPKN*REQALIPGSVIYHKQSQILLVYCK DGWIGVRSVMLKKSLTATDFYNGYLHP WYQKNSQAQPSQCRFQTLRLPTKKKQK KNCCYATMH
1156	9207	A	2103	3	215	
1157	9208	A	2104	2	341	SKPFSLOQTYEAKRNEFLGELQKKEEEM RQMFVQRVKEKEA/ELKEAEKELHEKFD RFKKLHQDEKKKLEDKKKSLDDEVNPF KQRKTA AELLQSQGSQAGGSQTLKRD EKKN
1158	9209	A	2105	1	130	
1159	9210	A	2106	2	3449	
1160	9211	A	2107	2	1609	FVPPPFVEAYGWGCRKNWNWAGHRGK RRVKSAPSPYPTFKGWAVEGRLGLEQRR GGPSLAPPPTGLGRARSVTLSCRRSSSV SCAVAPVAAAPVAALADAGAMAATDIS RQVGEGCRTVPLAGHVGFDSLDPQLVN KSVSQGFCAFNILCVGETGLGKSTLMDT LFQHQISKGEPATHTQPGVQLQSNTYDL QESNVRLKLTVSTVGFGDQINKEDSYKP VVEFIDAQFEALLQEDPKVRRVLQTYH DSRIHVCLYFIAPTGHCLKSLDLVTMCK LDSKVNIIIAKADAISKSELTKFKIKITS ELVSNQVQIYQFPATDESVAEIQLNPTP HLPFAVIGSTEELKIGNKMMRARQYPW GTVQVENEAHCDFVKLREMLIRVNMED LREQTHTRHYELYRRCKLEEMGFKDTP DSKPFSLOQTYEAKRNEFLGELQKKEEE MRQMFVQRVKEKEAELKEAEKELHEKF DRLKKLHQDEKKKLEDKKKSLDDEVNA FKQRKTA AELLQSQGSQAGGSQTLKRD KEKKN
1161	9212	A	2108	1	618	
1162	9213	A	2109	1	427	HPVRFFVHRGPH/VDFSLEVVSQWYELV VFTASMEIYGSAVADKLDNSRSILKRRY YRQHCTLELGSYIKDLSVVHSDLSSIVL DNPGAYRSHPDNAIPIKSWFSDPSDTAL LNLLPMLDALRFTADVRSVLSRNLHQHR L
1163	9214	A	211	217	624	GDELVKREAGMKMLPGVGFGTG/ELPP EVLVPLRAEGFTVEALWGKT*GGRRK ALLKEMNIAFHTRSRTYDILLHQDVLVC ISIPPLTRQISVKALGIGKNVVEKAATS VDAFRMVTASRYYPQLMSLVGNV

1164	9215	A	2110	2	835	WNSAELGRGGPGAGGAGVIGMMRTQC LLGLRTFVAFAAKLWSFFIYLLRRQVIRT VIQYQTVRYDILPLSPVSRNRLAQVKRKI LVLDLDETLIHSDDGVLRTVVRPGTPPD FILKVVIDKHPVRFFVHKRPHVDFFLEVI VSQWYELVVFITASMEIYGSAVGRLNW DNSRSIL*GGRYVYRQHCTLELGSYIKDP LLWFHRDLS\GIVIL\DNSPGAYRSHPGY GGR\DNAIPIKSWVSVTPSDTALLNLLP MLDALRFTADVRS\VLRSNLHQHRLW
1165	9216	A	2112	2	846	RFPLGCFPAQEPQGPVGPMPGAPAGNG HGS*SPHFHQGTGKRAALATWFNQAPAP ERSPDVKAPAKPRARRIAPRPRVGVPIRP IVRCPTVRYHTKVRPGRGFSLEELRVA GIHKKIVARTIGISVDPRRRNKSTESLQA KRAAG*REYRSKLILFPQRSRAPKKGDS SAEELKLAHPG*PGPGHAPSGTVYKKE KARVITEEEKNFKAFA\SLRMARANAPA LSAYRAKKS\PRKPQKTDVEKPTIKPCLG TWNQSGSHAGSPRGVFRGNNAWDGA SLL
1166	9217	C	2113	714	1010	MKSLNPHLDKIFPHKPLSSLASPSKTLVP GHLCDSTPFKFS\PNYLLFPQNH\PHTS LPSPPKDKGISPIYTPHCLGGVITLILCMH FYRFVCHLSY*
1167	9218	A	2114	2	227	ERFRPPIARVIDVSNGKVHVAE/SCLEET GGLGVDIVLDAGLDPPDSHCLFLKGATL AFLNDEVWNLSNVQQGRYL
1168	9219	A	2115	3	487	
1169	9220	A	2116	1	489	
1170	9221	A	2117	2	221	
1171	9222	A	2118	353	512	
1172	9223	A	2119	1	1706	MPRAAIAQTPAPTAPAAAAARGPGRRLA ALSSPHLRAAEHDGRCSSETGCHGVLD LASPTPPFRSDERPDQWEQGAGSLTKDW KVAVVKVQAVGAAQRQVSPGKRVLC GKRAF\KRKVERCPT\EP\CS\GEDGGSRR LTWDLFGPRPSLAEAAEGHFFLPHHFAV FGKQLVVIRCMWLLSQIGPLHYAKRRN HLERDVTMKGLYFQSSSTDEEITFVFQE KEDLPVTEDNFVKLQVKACALSQINTKL LAEMKMKKDLFPVGREIA\GIVLDVGSK VSFFQ\ADDEVVGILPLDS*KTPGLACESL LRVHEPLLGFINPEKVTWTEAAGSISGM GVRAYYSFLHLSFFIFSPGGNQCLIMDGA KCHLR\TIAIQLA\HHRGAKVISTACSL QCLERFRPPIARVIDVSNGKVHVAESC ETGGLGVDIVLDAGVRLYSKDDEPAVKL QLLPHKHDIITLLGVGGHWVTTEENLQL DPPDSHCLFLKGATLAFLNDEVWNLSN VQQGKYL*QSFQLRILKDVMEKLSTGV FRPQLDEIPLYEAKVSMEA\QKNQGR KKPSWFQF
1173	9224	A	212	858	992	LKSPQRP\GMVAHACNHSTLGARGGWIT/ R*GQEFKTS\LANMAKFHL
1174	9225	A	2120	230	535	

1175	9226	A	2121	344	2631	GDREGTGRAHTEEGAGAGMHFYDVEG VDWDRVQGPMMRGLSSSVQVGRFPAPK VSGPLSICVVRQLGLASSRFARSVPFGV WKKDLPCLSLLSQSEDELTPFDMSIQVR LPFNLRQI*KQYWLGMVAHAHAGTEKDK NSVNFKNYVLQELDNPGQ*YFKISFSLI YENISTLIKEDMGHGSDYSLSEVLWVCA NLFSQVQFKMSHKRIMLFTNEDNPHGN DSAKASRARTKAGDLRDTGGHISPF*IG T*LLFFYFLFF*IIIAEDEDLRVHFEESK LEDLLRKVRACKETRKALSRALSPGQL PTLPLNQKQAGRGGFKPPPIKLYRETNEP VKTTRTFNTSTGGLLPSDTKRSQVGR DAFCCCCF*DRVSLCRPGWRGLMLMGF KPLVLLKKHHYLRPSLFVYPEESLVIGASS VDHG*VTLTHSAVYGAALCRYTPRRNIP PYFVALVPQEEELDDQKIQTTPGMWQ RYFQGF*TLPIWHPWTPQGGGTURLA LDVSKKLETGTNCRQVKGLCWGNTGRN SKYRRAATTVLLSAVSVTHSATPEQ/VW GKMKAIVEKPRFTYRISDSFENPVLQGH FRNLRLALALDLMEPEQAVDLTLAQCS Q*IKRLGSLVDESKGASLPQPDYNPVEGK SYPKRKNTNK*KGLGKKRPGWK*FK KEGA*RPHIKKGVRWGVHCAPC*KEA CRGLRG*KSGKKQELLEALTUKHFGPL DQRPAPALPAVLPGCPGLVLSQLKCV SPELGRVYPT
1176	9227	A	2122	599	1063	SCSEGLNAVNNLKASRKPCLSLKWLFL FYFP**IDSQAFYPLISKIVKRKKMTHFW TLYFMYLFLRQSLALLRPGWSAVAQSQL TVALGLL/VLRQSSYVSPPGTWNHRYMP PCPAF*NYFCRDGGLPILFRLVLSWV*A VLSRPLKMLRLQA
1177	9228	A	2124	142	461	
1178	9229	A	2125	145	904	VINLVYLISPRPELKPVDKESEVVMKFP DGFEEKFSPILQLDEVDFYDPKHVIFSR LSVSADLESRICVVGENGAGKSTMLKLL LGDIAAPVRGIRHAHRNLKIGYFSQHVV GAAGT*TFSACGNLLGTQVFLGRPEEEY RHQLGFGMGISGELGHASSLPACLGQK EAEVAFCSGDLPCPNFLALADEPTNHLG HGRAIEALGPCLOTISGVGVLSHE*SA LSRLVCRELVWC*GRRRHPCGKEGF
1179	9230	A	2126	39	2220	GASFPQVPEWNMATCAELRSEFPEIDGQ VFDYVTGVLHSGSADFESVDDLVEAVG ELLQEVSGDSKDDAGIRAVCQRMNTL RLAEPQSQGNSQVLLDAPIQLSKITENYD CGTKLPGLLKREQSSTVNAKKLEKAEAR LKAKLRKRSEKDTLKTSNPLVLEEASAS QAGSRKESRLESSGKNKSVDRIENFDV SFGDRVLLAGADVNLAWGRRYGLVGR NGLGKTTLLKMLATRSRVPAHISLLHV EQEVAGDDTPALQSVLESDSVREDLLR RERELTSQIAAGRAEGSEAAELAKIYAK LEEIEADKAPARASVILAGLFTPKMQQ QPNPGVSQVAWRMLALAGALFARPD LLLLDEPTNMLDVRILWLENYLQTWPS TILVVSHDRNFLNALATDIIHLHSQRIDGY RIGDFETFIKSKQERRAQQQREYEAQQQ YRQHIQVFIDRFYRNANRASQVQSKLKM LEKSELKPVDKES*VVMKFP*WV*EAL RRPFCSLDEVDFYDPKHVIFKRLSVSA DLESRICVVGENGAGKSTMLKLLGDL APVRGLRHAHRNLKIGYFSQHVEAA WT*TSVLVELLARKFPGRPPEEYRHQLG RYGISGELAMRPLASLGGQKSRVAFQA MTMPCPNFYILDEPTNHLDMETIEALGR ALNNFRGGVILVSHDERFIRLVCRELWG

						MRRRRVTRVEGGFDQYRALLQEQRRE GFL
1180	9231	A	2127	45	339	PPPRTPSV*PAG*LRAS/STPPRSSSSSSSSSP RKGLSLRPQEALPPPPCPSRSSAPSAPR GGRGETPNKGTGGSLCQSCHPPVDVQ AVLNKCFEAD
1181	9232	A	2128	484	1879	FQGQRMAGELKPSCNLLEQSILLAKGTS/ GSSLTALISQVLKAP*VYVFGELLELCNV HELAE*ANAAYLQLLNLFAYGTYPDYIA NKE*SLP*LSTAQQNKLKHLTIVSLASRM KCI*PYSVLLKDLEMRNLRELEDLIEAVY TDIIQ*GKLDQRNQLLEVD*FCIGRDIRKKD INNIVKTLHEWCDGCEAALLGIEQQVLR ANQYKENHNR/TLQQQVEAEDVYILPQS GNDCRGLRFVSSSLIGGVRCVHLKHKGD AVVWEAIEEGEALPGKYRLKGRSVWA AAVRAVCMDQVTNIKKTLKATASSSAQ EMEQLAERECPPHAEQRQPTKKMSKV KGLVSSSPLGPAGAAGTHQAWVRWGG DTKGPFPLSTCSEFQTCPSPHQRLPTLL VLFQKNCYSPSPTPSPSCSLQTQGLHQC HPKTGSDTAQLPSRRFLSLCKGLVSLPVF LLPRHFVRLVISRRQL
1182	9233	A	2129	225	413	
1183	9234	A	213	1	126	FRAWTRSRSERRRRRRKRSSSGSEKFDK K*KKNSSRKKQHEE
1184	9235	A	2130	356	1024	GRAEPEDLENGEESSAELDYQDPDATSL KYVSG*CHPPSGWG/HEDALIVHCVDDS GHWGRGGLFTALGKA/SPLKPRKIYELA GENEKTLSLGGVLLFPV***KIQDTKGKI CWP*LWLSIVNRSNVLSGI*DGSPIRRA* RRY/CLAAKKAGKSSVQPPHVLDMPRK GFKRVGVPEPTLFGKHPGLQRGHPQPYH ILFPLEGKSACPFHSQFFILPSLKDSWCP
1185	9236	A	2131	3	205	
1186	9237	A	2132	3	205	
1187	9238	A	2133	1	428	
1188	9239	A	2134	36	417	QAFRKFLPLFDRVLVERSAAETVTKGGI MLPEKSQGVKVLQATVVAVGSGSKGKGG EIQPVSVKVGDKVLLPEYGGTKVVLDDK VCKP**F*KEVRYLQLVVL*TN*GFFHLQD YFLFRDGDILGKYVD
1189	9240	A	2135	496	751	ISLLNKHPSFFKGGIEQPIVSVKVGDKVL LPEYGGTKVVLDDK/DV*T**F*KEVRYL QLVVSTKGFFHLQDYFLFRDGDILGKYV D

1190	9241	C	2136	92	265	MSLVIRFIKGEIWEIYMTERISGTSSGM GRHHVDAISNSDLFQSTVLSKNCNNL*
1191	9242	A	2137	330	875	AYAAGFGDSCLIAMSGRGKQ*GKVFAK AKSRSSRAGLQFPGRVHRLRKGNYA ERVAGAGAPVYLAADVLEYLTAEILAE GNAARD\NKKTRIIPRHLQLGHPATTEEL NKLA*GRVTICFRGGVPS*TSRAVL/LPK KTESSPQGGQSDFDRLYLPRKRYSNP KGSFSEAPLPFQRKS
1192	9243	A	2138	25	414	
1193	9244	A	2139	1	65	RTRGRTRGNLSFI*NHM*QIA
1194	9245	A	214	90	943	SPLADTFLSSGLGRTASPRKAEARGTGR VRGLRRAVRASPGRMGRSRSSSRSKH TKSSKHNNKRSRSDKERVRKRSK SREK*RNRRRESRSRST/RHWPCPGAS GTGSAPRPRFTASTSSGARRASAGSLDE KQKARGGGEESGVPSGSEKFDK*KKN SSRKKQHEE*KNW*QKRVEELEKRRDE IEREVLRRVEEAKRIMEKQLEELERQRO AELAAQKAREEEERAKREELERILEENN RKIAEAQAKLAEELRIVEEQRKIHEER MK
1195	9246	A	2140	293	444	SPSGYGR*SEASRRPTWCSQFQLRQPPH EPPKSATWNQTPNIGNLSLPL
1196	9247	A	2141	544	1553	CQMRSCDRTECSFTTARICLSPLPTAFRT HTYGPKSCRSPACDVLGKGRSCRGWL RLASAWCSCARVSAGSALRFPMESEM ETQSAGAEEGFTQVTRKGRRRAKKRQA EQLSAAGEGGDAGRMDTEEARPAKRPV FPPLCGDGLSGKEETRKIPVPANRYTPL KENWMKIFTPIVEHLGLQIRFNLKSRNV EIRTKETKDVSDSDKRQTDVKAFILEG LSGWKE*HLTLRLDDLFLESEFIDVVKP LKGWDLHLSRAIGRIA/GAKEGKTKFTIEW VTRTTIVLADVKVHILGSFNKIMARTA ICNLILGNPPSKVYGNIRAVASRSADRF
1197	9248	A	2142	1055	1223	SSPGNLNVQEGFRITGLICY*KQYQY*MC FLFL/SLYVCVVFDFLLLLFCGHPLH
1198	9249	A	2143	2	256	SPGRTAMRSWSCRPCCGGGLG/SSQGRS EPGSSRLGPAPS/CGLTHPCRRGPSCPHPC PAGCRTCCGICPGPHPTSRCPSPRNCGQT
1199	9250	B	2144	1	2848	MARRPRNSRAWHFVLSAARRDADARA VALAGSTNWGYDSDGQLLQVTCLSLTG SWLWDAGVPAGSAVFDCAACPVSPNG PAVCCGQEHSDSDPEYSTLPSPISAV PVTGESFDCAGQSEASFCSLHSAHRG RDCRCGEDEYFDVWVWDDLKSSATLL SCDNRKVSFHMEYSCGTAAIRGTKEGEL GQHFWEIKMTSPVYGTDMMVGIGTSDV DLDKYRHTFCSLLGRDEDSWGLSYTGLL HHKGDKTS
1200	9251	A	2145	3	630	RSGBSASSGRAEARDCWGGRSLPGDR TLEPCGGCNSCSGSPACCVAPA*GPA AADPPACPLSLAAAGAGGGSTGTGKIC AGTG/GG*PSCCSGPPWSTPSGRISC/CCS LVAATPGREGPSLYTSCS*KR*VCRARCP GARQ*WSPGRTATRSWSCRPCCGGGPC RRGPSCPHPCPAGCRTCCGICPGPHPTSR CPPSCRCRRRERS
1201	9252	A	2146	16	716	SVLESKGQRNKGQRKGPVPAQEGSSTG KSVRSGBSASLWQGGQSRTAGVGGGRC PGDRTLEPCGGCNSCSGSPACCVAPA* GPAAAADPPACPLSLGRSICAGGGSTGT GGKWRWHRG*PSCCSGPPWSTPSGRIS C/CCSLV/CCHTY/ITSCS*KR*VCRARCP ARQ*WSPGRTATRSWSCRPCCGGGPCR RGPSCPHPCPAGCRTCCGICPGPHPTSR PPSCRCRRRERS

1202	9253	A	2148	123	488	LKCNFRLDKYCGGTAMSGGEQKPERYY VGVDVGTGSVRAALVDQSGVLLAFADQ PIKNWEPQFNHHEQSSEDIWAACC/VCH KGDSHRNVIMWLDHRAVSQVNRINETK HSVLQYVGGVMSVE
1203	9254	A	2149	2	321	
1204	9255	A	215	739	857	IIPSPNSNQLNPP***FPGNYY*YFNITQI NKDNYKTE
1205	9256	A	2150	257	565	INKDPIFVPGVWGPYFSAMVPGFWLNE GGQSVTGKLDILSTNTPHPITILGNTNSIL KTQLQHQPFLITSPHIPKTPQTSRTDQA SFLCSPSSDSLQILSL
1206	9257	A	2151	1	291	VADLTCLKGMVTGLKLFQDLEYLA TVQAIALGTRFIIIEAMEAAGHSISTLFLCG GLSKNPLFVQMHADITGSNGKNEQSWE SCVPETT*GKIL
1207	9258	A	2152	1	1690	FRDDPRVRARLRAESVYLKFNFRLDKYC GGTALSGGEQKPERYYVGVDVGTGSVR AALVDQSGVLLAFADQPIKNWEPQFNH HEQSSEDIWAACCVTKKVVQIDLNQI RGLGFDATCSLVVLDKQFHPLPVNQEGD SHRNVIMWLDHRAVSQVNRINETKHSV LQYVGGVMSVEMQAPKLLWLKENLREI CWDKAGHFFDLPDFLSWKATGVTARSL CSLVCKWTYSAEKGWDDSFWMIGLED FVADNYSKIGNQVLPFGASLGNLTPEA ARDLGLLPGIAVAASLIDAHAGGLGVIG AHVRGHGLHL*GAASDVTLAVICGTSS CHMGISKDPIFVPGVWGPYFSAMVPGF WLNEGGQSVTGKLIDHMQGHAAFP QVKATARMPEYILHI*TVTWDL*GRVQ PVGFSFTV*FYMGPDFHGNRSPLADTL KGMVTGLKLSQDLDDLAILYLATVQAIA LGRFIIIEAMEAAGPL/ESSTLFLCGGLSQ E/YPLFVQMHADITGMPVVPVARGGSPF LCGAAVLGACASGDFASVTTEAMAKMS KVGKVVFPRLPE
1208	9259	A	2153	1	479	AATSWGAAQTISSPILDKSLPADISIEDQQ CLVFRDVPAPVHFLVIPKKPIPRISQA EEEDQQLGHLLLVAKQTAKAEGLDG YRLGE*LLALGSPMNSHSYFSI*SSFFDL CHDPDSLTPSSISVINDGKLGASVYHLH IHVLGGRQLQWPPG
1209	9260	A	2154	284	604	RERRDIGGCWSSSSAWGNPREWGFLGN DQGRCTGSLRGPTSREHKTLAGPHKRIV SWGGS CPRIRGEDGWGCSPRS WLAGAL ATFIP*KAPFPRIPTG*RRRPAATYVPPLS L*LLGHLTPMWLSRQRLRGLGDGYRL VINDGKLGAQSVYHLHIHVLGGRQLQW PPG
1210	9261	A	2155	496	1579	NCLNSFSCSMNQMYLLIALMTIEYNLAY DSYYICIHFIKIVYKLTDFFLQML*ILM QIFW*GSLFLL**FQLIRDLPAFSLR*KL CPHLLKYKGILWKQILVLC*R*ILILMC DLFALSGHIVFLSFIMRKFSL*VTVKFIY MSIPRRPVQIL*EHLGLQDIIGI*ILISCY** ENRYSIVPLF/CF/VILITHFGFFSLF*I*LL VFV**F*FNPNQYI*FI/CFLSNLTFFL CFLVGG*/CFVKGHIV*DHCFHTCFTLHVF *STFIY*AFGLE*FHQMNTFW*FVMSSSN CYTLLGT*Q*ICKGKRNNFLYSANLNF** IIHFFLKIVWIDCF*NTNLWLWFFSSAFP ASK
1211	9262	B	2156	302	451	XEFLFKHPKRTATLSMRNTSVMKGGIF SAEFLKVFLPSLLLSHLLAIGLG*

1212	9263	A	2157	1	765	PPLSPGAHVGRGAPTSAFPPPAEAHPA ARRGLRSPQLPSGAMSQNGAPGMQEE LQGSWVELHFSNNGNGGSVPASVSIYNG DMEKILLDAQHESGRSSSKSSHCDSPPRS QTPQDTNRASETDTHSIGEKNSSQSEED DIERRKEVESILKKNSDWIWDWSSSAGKI FPPKEFLFKHPEAARPTLQA*GNRAVMK KGGIFSA/ENFLKVFLPSALLSHFAGPSG LGIIYIGKGVLTSTSTFWMKELGVTLV R
1213	9264	A	2158	1	381	
1214	9265	A	2159	2	312	
1215	9266	A	216	263	425	FAFQKFYITYTYF*KHTL/WLGAVAHCN PSTLGGQGGQIT*DEEFETTLDKMVKS
1216	9267	A	2160	1	576	
1217	9268	A	2161	2	313	VSYYHFHRMEKAHPEPGTWDSFLEKFM AGE/VWA*LEEGGCEAEGWWL*RTATL CRCPLPASLVSYGSWYQHVQEWWELSR THPVLVLFYEDMKVRPTVMLPPM
1218	9269	A	2162	901	1848	RRNMELIQDTSRPPLEYVVKGVPLIKYF AEALGPLQSFQARPDLLINTYPKSGTT WVSQILADMIYQGGDLEKCNRAPITYVRV PFLEFKAPGIPLRMETLAKDTPAPRLIKS HLPLALLPQTLLDQVKVYVYVAAQRKR SVAVSYHFYHMAKVHPEPGTWDSF LGESSVL*KVVLADSWYQHVQEWWEL NRTHPVLVLFYEDMKENPEKGRFQKDP WSLGGRLQEKTDGDFQVQHTSFKEMK KNPMTNLHPTVPPGSSMDHSISPL*GK GMAGDWKTFTVAQNERFDADYAEK MAGCSLSFRSEL
1219	9270	A	2163	3	287	
1220	9271	A	2164	75	301	AHKKLRAAPLAPMTGTH*KVFKAGD KVKAGNPSWVMFPMKMEHTIKSPKDG TVKKVFYREGAQANRHSFSRV
1221	9272	B	2165	63	368	MKGGRSPASPAKADGSHCDPKTAPKAK EAPAPPKAEAKAKALKAKKAVLKGVR HTQKRRSACHSPSGGPRHCDSGGSPDIL GRAPPGETSVATMLSSKFR*
1222	9273	A	2166	153	370	LIAGAFRKASGGNNIFRRPKTL*LRRQPR *PQKSTPRRNKLGHYAIKFPLTTESAVK KIEENTLVFTVLV
1223	9274	A	2167	842	1770	CTPEKCLPAVHRRNWLRNAEPPVWKRH LSPICRKRQGRATKPKRRPWYTTPTRR VRDVALRPYSRH/GRQPHAKKKIRMSLT FRRPKTLRLRRQPRYPRKSTPRRNKLGH YAIKFPLTTESAVKKIEENTLVFTVDV KANKHQIRQAVKKLYSDVAKHTEERR HDEQNNILTREAKNRNDNTRNRARTETN TETQKNSGYQALISFHSYSDTSDNKAH LVSYQSGQCTYDRLGWNLLIRMTCSRSL QHTYDIQSTQIASCFHPVSVRVNLRLYC ANYGGISAVFMPLRKELLILTRSSNSKVS QLRI
1224	9275	A	2168	3	281	
1225	9276	A	2169	353	605	EMAPKAKEAPAHPKAEAKAKALKAKK AVLKGVRSH/RKKKIRMSLTFRPKTLR LRRQPRYPRKSTPRRNKLGHYAIKFPLT T
1226	9277	A	217	2	660	FVTRPDAGVMRLPLVLLAVLLAVLCK VYLGLFSGSSPNPFSEDKRPPAPLVTDK EARKKVLKQAFSANQVPEKLDVVVIGS GFGGLAAAILAKAGKRVLVLEQHTKA GGCCHTFGKNGLEFDTGIHYIGRMEEGSI GRFILDQITEGQLDWAPLSSPFCIMVLEG P/KWPKGVPHVQWRESLHSGPQG/GSFH RRKLSLTSI*SWLRWYPVEPLMPSC

1227	9278	A	2170	301	946	PGSYLKPLSWTVALSRLRPGFMSRWPCQR LTWQRRSVTQASGASGLCASRLPRDK TAPKAKEAPAPPKAEAKAKALPKKAV VERCPHTHAKKRIRMSPTFRPKTLRLR RQPRYPRKSTPRRNKLGHYAIKFPLTTE VSAGKKNKNNTPLVHCGC*RPTRHQIR QAVKKLYDSDVAKVTTLICPDKEKKA YVRLAPDYDALDVANKIGII
1228	9279	A	2171	1	1602	
1229	9280	A	2172	243	620	LLTSSKVMNLSLLEVFS/VSSQSRSPSPGP NHTSNSSNASNATVVPQNSSARSTCSLTP ALAAHFSENLIKHVQGWADHAEKQAS RLREEAHNMGTIHMSEICTELKNLRSLV RVCEIQATLREQR
1230	9281	A	2173	3	688	QRSFLRVQPSPIPLLQDPNLLRQLLPAL QATLQLNNSNVDISKINEVLTAAVTQAS LQSIHKFLTAGPSAFNITSLISQAAQLST QAQPSNQSPMSLTSDASSPRSYVSPRIST PQNTNVPIKLISTPPVSSQPKVSTPVVKQ GPVQSQATQQPVTAG/PGPRS/SEPVSRR SSALK*PEKSITWVPIHTSNSSNGIQMAT VVPQEFFLARSTCSLTAGTSSTLQ
1231	9282	C	2174	1	1038	MEDFTTPLSTLASSMRQKVNKDIQDLDS ALQQADVIDIYRTLHPKSTETFFSALHC TYSKSDHVGSKALLSKCKRTEITTNCVS DHSIAKLEFRIKKLTQNRTTTWKLNLL LNDYWVDNEMKAEIKVFFETTQHDQNF TKARCIQEHRTYPYSQSFKLKAETRDPSF TKNVQKMKRVRDADLAVAALSRLRGK VWVKAWPPLRGCRCLVGCFLAFCIRSL MDVKHSCPVCQRELFYHRLPRSPRSA YLAVRDIGPKMARDTVNLWPQARDPSE NASPALLQTHAEKVLVRRVGSGLGTTLP RRGDDPTPERQISFLKCLLKKLSHGFGSE GAMPEEISH*
1232	9283	A	2175	1	1312	MGRNQSRKAENSKHESTYSPPKDHSSSQ AMEQSWTENGFEKLGFRKEALYYLDL TASCQSQELFQLYAGMSVVGTSMPVQA VCPYCGNRIITVTFVPGALTWLLCTTLF LFGYVLGCCFLAFCIRSLMDVKHSCPVC QRELFYHRLRQMEASSARTVVAPSRP CAGREGRGDANGKNSSPTAGSAMSSEPP PPPQPPTHQAIGVGLLDTPRSRERSPSPL RGNVVPSPLPTRRTRTFSATVRIASQGP VYKGVCKCFCRSQRAIGFNYPAGWAG PDIF/LWHIS*LWKGGVIVPSGKGDEGHP NKMCSHPHPKE*R/IAARPVKVVHHLTL APQAPKHETWSGHVSSLGGLVESTPLS LCFVGDFAGRRQQTLEDDILPHETGLQR GNGPSQVSPGGKGYGGAGVGCGVFP AIS TAYGPLQQPLHHLKSIKSI
1233	9284	A	2176	75	411	PIITKEHLFYVILVPSSGLDGIQG*SQKEG RGLAVPTPVSAAGLPAASMAEEAADQ VGRAALAWLCPAGRRRGFGGEVMRAL VASRPDLLTSASSGWALGSEGRVKASA D
1234	9285	A	2177	1	361	GIKRRSGREATRALITSPNPFRFPAGQS QARAARPTWSAASSAMEAAGSPAATET GKYIASTQRPDGTWRKQRRVKEGYVPQ RRSQYMKTSM*SFSRVNQSCPQG*ALRP LLSPHPGPEGGEPLQGQPNVNLEGE REKEAAAGKRKERAEGLSKDS*LRCPW EETAQLPSAPQGSRAAPTAASDQPDAA TTEKAKKIKNLKKLRQVEELQQRQAG EVSQPSKEQLEKLARRALEEELEDLEL GL*GLSPEATAPVTPSRA
1235	9286	A	218	151	414	ERERESVCVCMCVRVVCVCLRERERQ RQRDKRLCGEMRKIQYVNKLHYI/SKYL YIYKYVILQT*TFIHIYIYLYK*ICIHTQMY

					AVY
1236	9287	A	2182	3	140
1237	9288	A	2183	365	2078
					NLVHCHCLDIFINQAFDMQRDLQITPKR LEYTRKKENELYESLMNIANRKQEEMK DMIVETLNTMKEELLDDATNMEFKDVIV PESGEPVGTREIKCCIRQIQELIISRLNQA VANKLISSVDYLRESFVGTLERCLQSLEK SQDVS VHITSNYLKQILNAAHYHVEVTFH SGSSVTRMLWEQIKQIIQRITWVSPPAITL EWKRKVAQEAIESLSASKLAKSICSQFRT RLNSSHEAFAASLRQLEAGHSGRLAEKTE DLWLRVRKDHAPRLARLSLESCSFTGC LCLHRKPKLGQELGRGQYGVVYLCDN WGGHFPCALKSVVPPDEKHWNDLAEF HYMRSLPKHERLVDLHGSDIDYNYGGG SSIAVLLIMERLHRDLTYGLKAGLTLETR LQIALDVVEGIRFLHSQGLVHRDIKLNK LLDKQNRKITDLGFCKPEAMMSGIVG TPIHMAPELFTGKYDNSVDVYAFGILFW YICSGSVKLPEAFERCASKDHLWNNVRR GARPERLPVFDEECWQLMEACWDGDPL KRPLLIVQPMQLQGI/L*NRLCKSNSEQP NRGLDDST
1238	9289	A	2184	2	468
					GPEAVPHRACSLWLPTSPGPTCPATRHS EHEFTFQMWPGCASSLLCVGTPGEARA DHRCMRVTPVHLGLPGWVGAGARPH CCESATPGGPRGCPPT/DDWVAAHIPPSF HK*GNPGCIRGDPRGLLWPLCPMTCVAS DKAPALLGSACCSVWSVR
1239	9290	A	2185	170	1224
					PVWRGPAGPTPGIPSTTEKHTRLPSANM MVLKVVEELVTGKKNGNMGAGEFLPED FRDGEY*AAVTLAERQEDLKTLLAHPVTL GEPQLRKRETHERAELKKKLEQRSKLE NLEDLEIIQL*EK/RKKSRETKVPVLKDP EP*IHYGTCWECPTFLKA/SLWENNLV EKFLSDKNNPDVCDEYKRTALHRACLE GH LAIVEKLMEAGAQIEFRDMLESTAIH WASRGGNLDVLKLLLKNKGAKISARDKL LSTALHVAVRTGHL*GCAEHLIACEADL NAKDREGDTPLHDAVRLNRYKMIRLLI MYGADLNIKNCAGKTPMDLVLHWQNG TKAIFDSLRENSYKTSRIATF
1240	9291	A	219	4	328
					HGVSLFPRLECNGTISAHNRLRLS*SD SPASASQVAGITGMHHHARLIL/YFLVEM GFLHVQAGLELPTSGDPTLPWSPKCW DYRREPTSPGPQTYIITQSKSSP
1241	9292	A	2190	93	458
					LLLWTMSVIFACVVRVRDGLPLSASTD FYHTQDFLEWRRRLKSLALRLAQYPGR GSAEGCDFSIHSHQKVKWHFNYVSSSQ MECSLEKIQEELKLQPPAVLTLEDTDVA NGVMNGHTPM
1242	9293	A	2191	1077	1818
					LLLWTMSVIFACVVRVRDGLPLSASTD FYHTQDFLEWRRRLKSLALRLAQYPGR GSAEGCDFSIHFS/SFGDVACMAICSCQC PAAMAFICFLAETLWWEFTASYDTTCIGL ASRPYAFLEFDSHQKVKWHFNYVSSSQ MECSLEKIQEELKLQPPAVLTLEDTDVA NGVMNGHTPMHLEPAPNFRMEPV TALG ILSLILNIMCAALNLQPVQHVYLGQLDLG AH/HRKSFIGREKGNILVF*VDMIQ
1243	9294	A	2192	1	999
1244	9295	A	2193	1544	1928
					QKVRGQIREGCLEEV ALGSSRPPAHVCL GLPTGQTADGKSYVKYQVIGKNHVAVP THFFKVLILEAAGGQRELRTYVMPNAP VDEAIPLEAFLVPIESIERASGALLFVQNIL ARAGSLKAITAGSK

1245	9296	A	2194	2	1068	ARGWVPRPKPLAVFVSGREVTLLSSAAPA ALCPRWIPRRGSFKSLAGRPLGRSPAM RALRAGLTLASGAGLGAVVEGWRRRRE DARAALGLLGRLPVLPVAAAELPPVPG GPRGPGELAKYGLPGLAQLKSRESYVLC YDPRTRGALWVVEQLRPERLRGDGDRR ECDFREDDSVHAYHRATNADYRSGSFD RGHLAAAANHRWSQKAMDDTFYLSKV APQVP\HSNQIAWNNL\EKYSR\SLTRSYQ NVYCLH*GHFFLPRTEAD\GKS YV KYQV IGKNHVAVPTHFFKVLILEAAGGQIELRT YVMPNAPVDEAIPLERFLVPIESIERASG LLFVFNILARAGSLKANTAGSK
1246	9297	A	2195	204	507	GSPGTRSETREPGAMSQPPAPPPPLPPPP PPEAPQTPSSLASAAASGGLA*SGETGESF PGAARIRSVRRVYFSRPPVLSASSVPSAA SGTSSNSCWGLRR
1247	9298	A	2196	1	460	EFKQLIHIEHQPNGGASVIHAYSNELSHL SPMEMERFARKSLVGS*CSSENENSGSFP T*WGIVHGAATYLPDFLDYFSNFNPN PVKMEILGKKDIETTTMSNFHAQSLTVL QPGRQSETPSQKKRKKFMIMLSSRWEGE TKNKYRRLTN
1248	9299	A	2197	199	769	
1249	9300	A	2198	182	2889	TEKGAAAGTAGSCSRRQHAS PQSYGSPA SWSFAPLSAAPSPSSSRSSFSAGTAVPS SASASLSQPEPRKLLVPPTLLHAQPHLL LPAAAAAASANAKSRRPKEREKERRR HGLGGAREAGGASREENGVEVKPLPRAN DKTRSFDDFSPDQAAAECLSRKRRILKG SCQTGYLRKALFSDTVTLGIKASTYGF GGMIQSIVKGLAETFNFWIHWELNDLQ YISALFACSEEMP DYHLEKQLADKIKDKI KERDKEKEREKKKHKVMNEIKKENGEV KILLKSGKEPKTNIEDLQIKKVKKKKK KKHKEKEREKRPKMYKSIQTICSGLLT DVEDQAAKGFLNDNIKDYVGKNLDTK NYDSKIPENSEFFVSLKEPRVQNNLKRL DTLEFKQLIHIEHQPNGGASVIHAYSNE LSHLSPM/EGWERFAEEFVG/L*VFSENE NSAAFYVMGIVHGAATYLPDFLDYFSN FPNSPVKMEILGKKDIETTTMSNFHAQV KRTYSHGTYRAGPMRQISLVGAVDEEV GDYFPEFLDMLEESPFLKCTLPWGTSSL KLQSRKDSDDGPMWVRPGEQMIPVAD MPKSPFKRRTTNEIKNLQYLRTSEPRE MLFEDRTRAHADHIGQGFERQTAAVG VLKAVHCGEWPDPRIKDVICFHAEDF LEV VQRMQLDLHEPPLSQCVQWVDDAK LNQLRREGIRYARIQLYDNDIYFIPRNVV HQFKTVSAVCSLAWHIRLKLHYSEEDTS QNTATHETGTSSDSTSSVLGPHIDNMIC AVSKASLDSVFSKLSKYELQKIKHEPI ASVRIKEEPVNVNIPEKTTALNNMDGKN VKAKLDHVQFAEFKIDMDSKFENSNDK LKEELCPGNLSLVDTRQHSSAHSNQDKK DDDILC
1250	9301	A	2199	2	122	
1251	9302	A	22	10	284	
1252	9303	A	220	436	777	IYSYGKTGPV*KRKNCQSRIEQNPICW LQATHLKCKETYK/LK/MRKICQANTNQ EEIGIL*NSRLYSKNYYQG***KGSILQED MTILNMYAPKNRSGGYMRQKLIELQGE
1253	9304	A	2200	1130	1437	LSRIMKAWFPLFFKIPFRDKVFFLSPPAW SAVAQSRLHCSLELVGSINSSISAS*LGW EYRCAPQCPG*FLAFFCRDGALPCCPSWS QVICLP*PPKALGLQA

1254	9305	C	2201	279	449	MHPVSCWVIMSCRPLCTRLILSDSPGPP SDICVSRKNPSNYPAMVLPQCFTICII*
1255	9306	A	2202	1	1173	
1256	9307	A	2203	1	2112	MGVELFTPASVMGVKRCSSIPGQLSGN GEPRFSEIDSSVSVRGGWQPRWFLCGGI LSYYDSPEDAWKGCKGSIQMAVCEIQV HSVDNTRMDLIIPGEQYFYLKARSVAER QRWLVALGSAKACLTDSRTQKDKEFAE NTENLKTkMSELRLCCDLLVQQVNKTk EVTITGVSNSEEGIDVGTLLKSTCNTFLK TLEECMQIANA AFTSELLYRTPPGSPQLA MLKSSKKVNQKYITNKEEFTTLQKIVLH EVEADVAQVRNSATEALLWLKRGKFL KGFLTEVKNGEKDIQTALSFSSN/SCT/CI WRLGPGDVLTL*RKRRLL* RANAAL*LQ* SQPVSAFSSLSPP/CGTIFNGKEKGCKFD IFVLMFRLISKKTQTQALRKRFFEKCLH NSYSEPVGSLMHISGIMVFPFHFVPAFI SRTDTLFEMREDNAYGKTLRQHHGWVV RGVFALALRAAPSYEDFVAALTVKEGD HQKEAFSIGMQRDLSLYLPAMEKQLAIL DTLYEVHGLESEDEVLYPLGCLDCCPEGE QSWFQKKNVFGCLSQLPVGRGVQLPCG HEGPAKENRVWLCMPLAITPESAE AQNR DNHLWSSVVRVDGELMNDGLTSALRT QITFGMICCVNALSS ENKVVASLLTLVRF TAAPSLPTLHCVSRHLQVEDPHLVMSVC ECGTTISLPEPRSQLQCSTAVSQLEDSRR MAEH
1257	9308	A	2208	132	509	NMVQTTCPGLMSTPCTGPAQARR*/K/ WL VVECLSLTGMGPGEGRGQGA AEAP N*VLGTPAGGSGPCPPGIQQTTPSPHQPH SQVLSSLSPTPRICPGFLAYLLSLFTPREE LQLTQNDTFLAPRV
1258	9309	A	221	212	275	FLILNCNSF*KIYPKYKSLIR
1259	9310	A	2218	491	812	
1260	9311	A	2219	2	948	IFKIAFAKFGVWAGEWGREGMGRKWS ARAAAQRAEPRSGRQVRPRALRLPPARQ PRQLEPSRPPAAAPESPSSSAMAGWN AYIDNLMADGTCTVTGAIVRYQDSEPPF WHA VPGK/TRFVNITPAEVGCPWLAKTR SSFLR*MGLTLWGGQKICSVNRGLHCLQ EWGIIACDLRYQEPPGGAPHL SIVTCHPR LNKDAKSWLMGQRKVSHGGLTNKKCY VEMASHLSGFPSTDRLVPFPLSPFPTAFA PLSLPIHTQTNFYFLGPLPHTPYCCQNHM GLGGQGLMGQTSPTHIPSRVWLEKLLF FGVFFFSE
1261	9312	A	222	770	1573	NHLEIVNLCNVGISQSFPQI*LKAQATKE KINCIPIKLKTFG/TEKYIHKNVKRQYIE*Q KISANHLSDKRLVFRIYFLKTTTVQY*KD KPIIK*VKDLNR/HFSKEDT/YMTNKYMK RC*KSSSTIREM*IKTTMR*TLPHYRWNIK KTDNNNC**GCG*TGNIHCWLECKIMY P/IFRTV*QFPEKVKQHYP SDAAILLLGIY PRNMK/SKCLPKNYTRMFITELLILKK*K QLKC/PIN**W/K*NDKMW*IHMICYSA IKRHRVLINA
1262	9313	A	2221	259	941	PVSWSLNSCRFFFFF*DQSLPSVV/QAGS GQ*RNLD SLQPLASRFK*FSSSRLASSW DYRHMATMARLIFIFLVEMGF TMLARL VLNFLTSSDPPTSAPFKWLGLQGVKPN RAVGFN**LGYYSIILYHSNSPGTDLVFI FIYLFYTLFLRQEQNSAAQARVQ*WHNL GSLQSPPPGVH*FLCLSLPSSWDYRCAPP HQANFCIF*RDGVFPCWPGWSRTPDLR

1263	9314	A	2222	343	600	MSPLSQFVDGTLTKIQCYYGTEFHSVAI RLECIGMISAHCNLCPLGSSNSPASAS*IA GIIAP/CHHAPLIFVFL*RGGFTRIYFFK
1264	9315	A	2223	142	583	
1265	9316	A	2224	163	1603	IQAGQCGNQIGAKFWEVNSDEHGIDPTG TVYHGSDSLQLDRISVYYNEATGAGKY VPRAILVDLEPGTMDSVRSFGPGQIFRP DNFVFGQVWGQVTTWAKIGHYTEGAE LVDSVLDVVRKEAEVSCDCLQGFQLTH SLGAGGTGSGMGTLTYQQGFEKEYPDRI MNTVSVVPSPKCLDTVVEPYNATLSVH QLVENTDETYCIDNEALYDICFRTLKLT TPTYGDLNHLVSATIE/CVVTTCLRFPAGQ LNADLRKLAVNMMVFPRLHFFMPGFA PLTSRGSQQYRALTVPELTPARSFDAK NMMAACDPQGPINFNRGLSSRSGSGC PMKEGRMKQML*RCKNKNSYFCGNE SPNNVKITAVCDIPTSWASKMAVTFUGQ *HSPSQELFKRSEQFTAMFRRKAFHLH WYTGEGMDEMEFTEAESNMNDLRL*S IKQLPRMPTQEEEDFGEEARKRRPKGR APNQLKASQFP
1266	9317	A	2225	234	1374	KSGGLRRRQRPGRSAAVGEEELPPGMEK FKAAMLLGSVDALGYRNVCKENSTVG MKIQEELQPVGGLGHLVLSPEWVPSD NTIMHIATAEALTTDYWCLDDLYREMV RCYVEIVEKLPERRPDATIEGCAQLKPN NYLLAWHTPFNEKSGSGFAATKAMCIG LRYWKPERLETIEVSVECGRMTHNHPT GFLGSLCTALFVSFAAQGKPLVQWGRD MLRAVPLAEKYCRKTIRHTAEYQEHWF YFEAKWQFYLEERKISKDSKNKAIFPDN YDAEERE*TYRKWSSEGRGGRRGHDAP MIAVDALLAAGNSWTELCHRAMFHGGE SAATGTIAACLFGLLYGLDLVPKGLSQD LEDKEKLEDLGAALYRLSTEKK
1267	9318	A	2226	139	366	AMAYQLYRNTTLGNSLQESLDELIQGS NTYRFGDNVWTFVLNDVEFREVTELIKV DKVKIVACDGKNTGASNTTE
1268	9319	A	2227	160	588	AMAYQLFRILPLETSFQESLD*LIQSQQI TPPTCPFKFYLDRAINAALAQVRN RIVNFRGSPKYGTRFCADNVGDFWYRND VEFQRG*PEPIKRG*K*KLVAICDGKNTG LPIPTEWNRKKYDFFYTHLLFIAFEREA
1269	9320	A	2228	918	1085	QEKLFI*VLCFNFFSFFFFFCFLVD*F*FL FGKGAV*TLFVFSSASHRYRQGKTR
1270	9321	A	2229	145	365	
1271	9322	A	223	86	427	SPQIRKQEISI/SLLTDGTILYIENPKESPPP KLLKVIKFNKATRFKINMQKSUVFLHPR N/QFENEFKKILSFGTEPS/RSEYLGINITK EV*NLNTKNDIVEKMKELLSKWKDSPC
1272	9323	A	2230	2	750	ILGFDLQPPGRRWAAPAVSGLSRKVR FSTG*VRPFAKLVGPSVQVYEGIEGRYA TVALYSAASKQNKLEQLEKELLRVAQN PRRNPKVACFLFNPLCESRSIKSEKALN DITSKRRFSPPSTTQ/LLNQFCLAGKMG PI*ANNPKGVVSGLFLTMDGVFHSRERV PLHSGPLASSFRKESHTLLNLKTVLKEFP KVKGQVLELGAKTDPSNLGGMIVRIGE KYVDMSVKTUQKLGGRAMREIV
1273	9324	A	2231	100	468	ATEPLAPSERREVSIPLLVPAPLPPPPRPP VPSRTRTRPWRP*ACFPMTLAASCGPT RSPWPSQQPIQPAPVG/PGNIKTLGDAY EFAVDVRDFSPEDIIVTSSNNHIEVRAEK LAADGTVM

1274	9325	A	2232	228	721	LWQLHAAPLGAPGLPRQVIRALRGGEV HREGTSAPGRHRRRCGCPVGLQVLHSL QPCVATKTDVATGTDVAMKTGNIKTG DAYEFAVDVRDFSPEDIIVTTSNNHIEVR A/REA/ERPDGTMNTFAHKCQLPEDVD PTSVTSALREDGSLTIRAWRHPHTEHVQ
1275	9326	A	2233	3	605	KKLTPVVRSRVERDPRVRRGLRPHVLS SLRPPGQGPAPSVDEPQNLFLHPSGEKIP FLFLLLLLFTPPRPPVLSRPRTRPWRP* ACFPMTLAAICGPTSPWPSPAPV/VAG NIKT*DAYEFVVDVRDFSPEDIIVTTSN NHIEVRPEKLAADGTMNTFAHKCQLPE DVDPTSETSALGEDGRLTIRARGHPHTE H
1276	9327	A	2234	229	510	KGIHWYINMEEQFVI*IHFL*TRSQFYFVNI TFKYIYTHIYVQLYIHVH/MICKFIFIYNI *IDICRQVIDYRDPKQLNNSCKFSSLT A GV
1277	9328	A	2235	203	334	SRRDHSFIL*ILHLSIYIHTYMYNYIYMC YMYQRKQYGKTNP
1278	9329	A	2236	1023	1470	TPKTKHNSNPFVPHAHKFACSYFFFCCLC VFMGSKLNLAIYKNVNSKLYLLRNVI F*FIFTQLFILIYFFYTVLNTQTYFLFMIFL SCSHGICFPILFSLISITGWDLTNNNVRGR KYFATVDYYTLKFYIMKIYNSLYASKKK KKA
1279	9330	C	2237	226	450	
1280	9331	A	2238	3	449	LLRRVSVTAVAALSGRPLGTRLGFGGFL TRGFP/KAAAPVRHSGDHGKRLFVIRPSR FYDRRFLKLLRFYIALTGIPVAIFITLVN FIGQAELAEIPEGYVPEHWEYYRVKELE VRKLMHVRGDGPWYYYETIDKELIDHS PKATPDN
1281	9332	A	2239	3	635	HASAHASAMSLRRVSVTAVAALSGRP LGTRLGFGGFLTRGFPKAAAPVRHSGD HGKRLFVIRPSRFYDRRFLKLLRIHLAL TGLPVTIFIALVNVFIGQAELAEFPEGYV PEHWGILLRHPISKMGFAR*FLMIGPEK DIMERNNGPSFQIGSLKKAGIYGVKGSW EVRKI*WHVEEGDGWPVLLWRPFDQGT LLDHSSRKPTPWTN
1282	9333	A	224	35	397	FLTGTQWKG/DSPFNTWC*DH/WNIHRN LDLYLIPYIKINLKQLTGPNLRAKTIKLE QNIGENLCDL*LSRERYSTKSITRIRKL/D TLGFIKIKNKCISKDTIRKR*ATDWEKIFA NHVLKG
1283	9334	A	2240	811	1005	SNFTGKIHK*LTSFKIVNLFYIY/FFETGFH SLTRLECSGMILAHCNLRFESRKLFFFG AIDSF
1284	9335	C	2241	256	540	MSPAKATEMLIFGKKLTAGEACAQGLV TEVFPDSTFQKEVWTRLKAFCKLSPNCL EIFKEVXRKRERXKLXAVNAEECNVLQG RWLSDECTNAV*

1285	9336	A	2242	602	2067	SSSSGLALGMQRPLLARLRGTPGRALSA PAATGFAELRAAQGMAMAYLAWRLAR RSCPSSLQVTSFPVVLHNMRTAMRASQ KDFENSMNQVKLLKKDPGNEVKLKLY ALYKQATEGTCKMPKPGVFDLINKAKI WDANALGSLPQGSCPG*NYVDLVSSL SPSIGNPPSQVEPGTERDNQLGFETLVVT SLEDGITKIMFNRPKKKNAINTEMYHEIM RALKAASKDDSIITVLTGNGDYSSGND LTNFTDIPP/GVGVEEKANTNAIVLLRÆF VGICFIDFPKPLDCSGSMGPSCGASPVTL LGAYSMPVLLHLDRGTFTPTF*SP*AQS PEGACSSYTFPKIMSPA KATEMPFIFGKE VNOREEACASRDLETFEGFPWIALFRKKV WDQG*RAFCKSFPPQMALEEFKEVIRK REREKLHAVKAEECQCPFGKWLSDE CATNAIVVNFLSQKIKNCDDHLQHQSM SQGRMCCSLCLSSTGK
1286	9337	C	2243	2163	2402	MSQAAASHKSKLTPKNQRAPFTLLRKSQ CQDPSRGESEEGWWPIQRACRSMETFLP QMFQSWHQYKKNVSRDQFFTLK*
1287	9338	A	2249	761	1178	LSTPLTSWCWMRRTTPGSPTTRCSCSSA PGTQPLGGGHQ*RGCHQCVASSPR*AWP ASGPAKLQ*LQPKTQQRAPATGEHVPP VQPSAQ*PHSRFQSSETSRPADGSEQQPA RASGPGARRPPHQPRQVINCWLRR
1288	9339	A	225	832	1043	LLWWFRLRSSPCGTQQGPWHLVCVYGY AGGWAGPPWHITCPWDP SHCPGTE*CP WCVWFCFFCNTYLLVPN
1289	9340	A	2250	135	408	PHSRFQSSETSRPADGSEQQPARASGPGA RRPPHQPRFHPPSA/RAISIECPA*AVMR SGSEPRARQEYSLGLWTPSQFLQGILYLA RSPT
1290	9341	A	2251	123	578	TTNNIFKWAKYFKRHFSRDI*MANEHM KRCLTSLTIMEMQIKTTIRCHLT/PRMPII KKIIC**GWRETGTLI/YAWWECKIVQ/P AFR/TVWQFLKRLSQHPTIPFP/GMCPRET KTHHSKTY/TQMFMALFIEARKWKQF KCLSTNEWTNVVRP
1291	9342	A	2255	209	531	
1292	9343	A	2256	1	308	AKRAQSYAERLRLGLAVIHGEAQCTELD MDDGRHSPPMVKNATVHPGLEPLMM AKEKPPITVVGDVGGRIAIIVVWLYVIHV QRWHSWLLVSRLSTLGLYF
1293	9344	A	2257	2	1161	VRKGTDLGALPVPPPAMNAARTGYRVF LVANSTAVCSELAKRITERLGAELGKSV VYQETNGETRVEIKESVRGQDIFIQTIPR DVNTAVMELLIMAYALKTACARNIIGVI PYIPYSKQSKMRKRSIVCKLLASMLAT AGLTHIITMDLHQKEIQGFFSFPVDNLR SLHLFLAFSIIQGRKFPNLQEMQVIVG*V FLDAGKGGAQSYAERLRLGFWAVHSR GEGFSCTKLDMDDGRHSPPMVKNATV HPGLEPLMMAKEKPPITVVGDVAGRI AIIVDDIIDVESFVAAAIEILKERGAYKI YVMATHGILSAEALRLIESSVDEVVVT NTVPHEVQKLQCPKIKTVDISLILSEANR RIHNGESMAYLFRNITVDD
1294	9345	B	2258	80	402	XVPTVDTYDGRGDSVVYGLRSKSKKFR RPDIQYPDATDEDITSHMESEELNGAYK AIPVAQDLNAPSDWDSRGKDSYETSQD DQSAETHSHKQSRLYKRKAYDESH*
1295	9346	C	2259	272	409	
1296	9347	A	226	764	1016	LLQAGAHACNPSGFGEAKAGGSTDLRS GDQPGQHGETPSLLKVQKVA*RGGAFL* SQL/LRGGGCEPRSHD*IPA WMEGDS V

1297	9348	A	2260	2	628	EHSIVGTRLVSGQLQPSQPNADQGKLT MRIAIVICFLLGITCAIPVKQADSGSSEE KQLYNKYPAVATWLNPDPSQKQNL PQTLPSKSNESHDMDDMDDEDADDG PCGDSQDSIDSNDSDDVDDTDDSHQSDE SHHSDESEDELVTDFPTDLPATEVFTPVVP TVDTYDGRGDSVVYGLRSKSKKFRRPDI QVNPLTDTDPGSD
1298	9349	A	2261	67	1276	SHASGRRQSTASSGPDVSGQLQPSQPN ADQGKLTMMRIAIVICFLLGITCAIPVKQ ADSGSSEKHFYNNKYPAVATWLNPD SHKQNLAPQMAVSSEETNDFKQETLPS KSNESHDMDDMDDEDHVDSDSI DSNDSDDVDDTDDSHQSDESHHSDES DELVTDFPTALPATEVFTPVVPTVDTY DGRGDSVVYGLRSKSKKFRRPDIKYP ATDEDITLHMESEELNGAYKAIPVAQDL NAPSDWDSRGKDSYETSQLDDQSAET HRHQQSRLYKRKANDESNEHSDCDW* ARTFPKVSREFHSHEFSSPWRFLFVAP KSREEDNTPLEFRYSQELDSASSGGQLK GGKNTISPLCHLVQKKNFGIAKMKENHE MLLSPVYWLKCVSI
1299	9350	A	2262	1	651	MTAFNSGKVDIVAINDPFIDLNYMVYMF LYDSTHGKFHGTVKAENGLTVINGNPIT IFQDQDPSKIKWAP/LAKVIHDNFGIIEGF MTTVHTITATQTINGPSGNCHVMAAGL SRTSSLSLLA/LAKPVGKVIPELNGKLTG MAFHVPTANVSVADLTCRLEKPA/KYDD IKKINTHSSTFDAGAAIVLKDHSVKLISW YDNEFGYSNRVVHLMAHNASKE
1300	9351	A	2263	2	5264	
1301	9352	A	2264	56	1357	IRLSVCSSCSTVSRIFFCVASRATSLRTPM GKVKVGVNGFGRIGRLVTRAAFNNGKV DIVAINDPFIDLNYMVYMFQYDSTHGKF HGTVKAENGLTVINGNPITIFQERDPSKI KWGDAGAEYVVESTGVFNQPWKKA GAHLQGGAKRVIISAPSCLMPPMFVMG VNHKEYDNLKIIISNAFLQPPTCLAPL AKG*FHDNFG*SWEGLIDHSSMAITGNP RKTVDGPSRGWNCGRGWAAGL/SRTSSL GLYWALPKA/VGKGHP*G*TGKLTGMA FPVVPNCQNVSVVDL/TCRSRKTLPQYD *HQGRVVKQA/SEGPPQGAILGYTEAPR WVSSDCNSGPPVFPFDAGA/GIALND/H FVKLISWYDNEFGYSNRVVDLHGPHGL QGSKTPGTTEPQARGTRGRDETLTAGES LPHSDPHHTESPLLTVM
1302	9353	A	2265	34	476	LSGGPRRAASCASSAGLLVLLPFMPMFI VNNTKLHRASLPEGFLSKLTQQLAQAN RQAPPN*FAFNVPDQVYSFGSSEP LACSLHSIGKIGGAPDPAPYSKLL/CGPAG RSRLPIQARTRVYINYVDMNRGQMW GNNFHLSP
1303	9354	A	2266	63	470	QPPPERPAHQFARPPAPFTMQPASAKW YDRRDYVFIEFCVEDSKDVNVFEKSKL TFSKLSFLSNDVK*SFTQLNFDWLVS LKLLIFVSLKRLNSFFIILYSLGGSDNF KHLNEIDLFCIDPNVSSLYA
1304	9355	A	2267	2	854	RAFCCVTSRRPASPLVCTHARSFVLP LFLHFPLLPDRRSRFRVHFVGRSSPP HAAVRLREARRGRDRREKAESPTGEKST SPSSRRQRGPPTKVRPPAPFTMQPASA KWYDRRDYVLKWEFVFLNTRDYNV NFEKSKTYNFSCLREGSDNF*GI*MEID LFHCIDPNDFQGLKGTDRSIFMFVLRKR RIWASSWPGLTK/ERGKGLIWWVSVDNF NWKDWEDDSDEDMSNFDRFSEMMNN MGGDVEVDYPEVDGADDDSDSDDE

						KMPYLE
1305	9356	A	2268	117	388	
1306	9357	A	2269	66	354	
1307	9358	A	227	748	1488	RLTKRPETFPRRHPKLPTLTKTPVAGATPL SPSHPDWPFVFNPIPLTNRT*PPLQLLRQ PSRSCPETTQGAISSEALPVRSPPPFR LFPTPE/PGLSRQWP*EVEGTSRTPFKAE GQK/EGKVKEGKTEGPCSPSRTRILPPY SRLESGPVHWGEQGNRKS WPPPNLPDQ GF*QEREEAMGHIPSPPGIRQRHRTSVQE *GSEIKPK*CPEPGKAFNPRPWGLGLT/TR PLPLHSQKSRQDS*NTG
1308	9359	A	2270	148	398	RPAKRGAAAMDGRVQLIKALLALPIRPAT RRWRNPFPFETFDGDTDRLEFIVQTAS YPPWARTRSSARPISSPPPETSCVLA
1309	9360	A	2271	356	1241	KVTFLITRLTGPAQVGDPLHQEGEPPQ LITGAFWPEMKRVFGWGGGRGLALGRET LGPG\GGCSGEGPLCYWPPGSPAPSF RASPPLEPPARCPLRSCSLPRSACLCSRNS APGSCCRPWASLWSEPPSPSSQPAPPM YIWTLSAPVAQS*APVTHWTDHPLPPL PSPLLPTRLPDDLHFGPQTLRCQ\SHRVH PSHPHRQDCWLL/M*IWTHLGGUWAGVH SPWTVIQTAGR\PPRDLSPSARPISSPIPE TFCAPATWLPGLSCAWQAKFESLIFSLW TKLVFAHKRSIS
1310	9361	A	2272	2	178	
1311	9362	C	2273	88	228	MKVDKDRQMXVLEEEFQNISPEELKME LPERQPRLQRXTTDDVCRE*
1312	9363	A	2274	3	382	VDRTIMSDSLVVCEVDPELTEKLKRF RKETDNAAIIMKVDKDRQMVVLEEEFQ FVVYSYKYVHDDGRVSYPLCFIFSSPVG CKPEQQMMYAGSKTRLVQTAELTKVQT GMWLQSVRERWCGSWV
1313	9364	A	2275	89	636	KTAE LRKEEACGQNNHALPGSLRQSDSL VVCEVDPELTEKLKRFRRKETDNAAI MKVDKDPARWWCLEGKNFKNISPQREL \KMGFPRRDKPRFVVYS\YKYVHD\DGAR VSYPLCFIFPPRPVGCKPE\QQMMY\AGS \KNRLVQTAELTKGVPKSRTT*LTSLRP WL\QEKLSFLSLISGAGD
1314	9365	A	2276	2	2453	
1315	9366	A	2277	1	1008	
1316	9367	A	2278	1	884	MVDKCRYHQSLHKVSNSESKISSGLLL SRLQRRPRGRGDAELRRAGSVKRRQRG KMAAAVPQRAWTEQLRSEQLPKKDII KFLQEHGSDSLAELKLLGNIKNVGKT ANKDHL\VTAYNHLFETKPF*GYLKV*S KVSEQVKKCERLMKINPKETKSERDPW NEG\PPKIYTKSCS*KRDKTQLFPKRGD V\VHCWYTGNTTKMGTVF*YLIFQTS KKKEKCPSL*GFKVRSRPKLSRGWDEA LLTMSKGEKAR\LEIEPEWAF\GKKGLPD AKIPNNAKLTFEVELVDID

1317	9368	A	2279	3	510	AIRAVAYCADMAQSMNHTTLHQSRW RIGIKKPRSQTDQSLTGVDPMFLKNMRF AKKHNNMGLKRMQANNAKAMSARAE AIKALVKPKEAYL*IPNGVSRKLDPLAYI AHPKLAKRALARIAKGLKLCRPEALAEA RAKDQTKVQGVAPA*APAHAPKRTQAP TKASE
1318	9369	A	228	34	478	LSPRLECSGAI*AHCNLRPPGFKQFCLSL SSSWDYRHAPPTQLIWFYFK*RPGF QLVLVQAGLELTL*IPPASASQKCIWD YQV*APH/WPALYKVS*EKWFPIMFFA PFSWLSLGTKEFVRKVAVAGLTLPTG WALCSLWKY
1319	9370	A	2280	9	674	IERLQVRIACSCRDAIPGSSHASAHASEA LREPLNGADMAKSKNHTTNNQSRKW PURNIGIKKPRSQRYEFS*RGWPPQVSLR NMRFAQRSTNKKGP*RRLOANKLPRAM SATCPRLIKAPPLKAPRRFKPDPPKGV RKLDRLA\YIAQPQGLGSVARCP*LPRGP RLACPPKAKGQGGQAKAKDQTKGFKP RPRVQAPVSVSVQAPKRTQAPTKASE
1320	9371	A	2281	417	822	RENCILLSTRAQSVFNAQGTALWSFQDP ATGEGGAGHGGRMLRPSLLPSQGASAC* /PRFGESKLAPVGKFKMCLLELPFLSHH LSRGCSGASEGQLCLEVPATARVGVHK PSQSRGLEFSWVMSDLCSPPL
1321	9372	A	2284	85	409	TCGLPMCQKQTVSWGKTPSLRRFPQR PRPPRGQPPSGARWEH/PPGTTAPRRSR RPSPPARLAGPEP*AKSPLHAANSRGQTK GHLWKTLLVLFKKPNFFFFNFHN
1322	9373	A	2285	193	609	NQINFCLNGKYTYICIDTPLYMFNIHTL KHINTSVIISLEFAI*HKGQVELHIKITYRS N*MWLGHNQRRN/LCPQEGEEIPNEA*IF SIIKRQSWPGTVAHACNLITLGG*DGRIS* DQVFKTSLINIVETPSLLKK
1323	9374	A	2286	117	433	
1324	9375	A	2287	2	1923	VETPPQGSVHSGHLGSVVGDPHTGTGN AGERGPRGKGARVLALDSGGMDSSPSLP LIRTPESSLHEALDQCMTALDLFTNQFS EALSULKPRTKESMYHSLTYATILEMQA MMTFDPQDILLAGNMMKEAQMCLQRH RRKSSVTDSSSLVNRPTLGQFTEEEIHA EVCYAECLLQRAALTFLQGSSHGGAVRP RALHDP SHACSCPPGGRQHLFLQDEN MVSFIKGGIKVRNSYQTYKELDSLQSS QYCKGENHPHFEGGVKLGVGAFNLTL MLPTRILRLLEFVGFSGNKDYGLLQLEE GASGHSFRSVLCVMLLLCYHTLFTVLG TGNVNIEEAELKLPYLNRYPKGAIFLFF AGRIEVIKGNIDAVSDGGPGRGWGSLGV SQTSRKSGTCDILDRIDWGRGGGPREN QPESRRRGPSGRAAWEDKGGGGICGA WDFDWEI*DCSIAVEGGGGRCLEAEVR KAHLFRA*RLGWSLVPLHYSSLLLFHF VTKNQSPRRGLYLSPTSCKT*EVKPGLE ARSPGSWGPT*A*HRAGPLCPGGVPVCC GVGRFGGCRGVGAGWAPVRLTRRCLQ AIRFECECEAQQHWKQFHHMCYWEL MWCFTYKGQWKMSYFYADLLSKENCW SKVG

1325	9376	A	2288	1	1818	LGEGGGKKGLWDLVAGLHPLGGQQSP MGQKGHKDSLPCGGTPESSLHEALDQ CMTALDLFTNQFSEALSYPRTKESM YHSLTYATILEMQAMMTFDPQDILLAGN MMKEAQMCLCQRHRRKSSVTNSFSSLVN RPTLGAQFTEEEIHAEVVCYAKCLLQRAA LTFLDENMVVSIKGGIKVRNSYQTYKE LDSLVSQSSQYCKGENHPHFEGGVKLGV GAFNLTLMLPTRLRLLEFVGFSGNKDY GLLQLEEGASGHSFRSVLCVMLLLCYHT FLTFLVLTGNVNIEEAELLLKPYLNRY KGAIFFLAGRIEVIKGNIDAAIRFECC EAQQHWKQFHHMCYWELMWCFTYKG QWKMSYFYADLLSKENCWSKATYIYM KAAYLMSFGKEDHKPFGDDEVELFRAV PGLKLLKIAGKSLPTEKFAIRKSRRYFSSN PISLPVPALEMMYIWNQYAVIGKQPKLT DGILEIITKAEMLEKGPENEYSVDDECL VKLLKGLCLKYLGRVQEAENFRSISAN EKKIKYDHYLIPNALLELALLMEQDRN EEAIKLLSAKQNYKNYSMESRTHF*IQ AATLQAKSSIENSSRMVSSVSL
1326	9377	A	2289	486	713	SKFYLFYLYFFVYTYVINIVYIKI*QQID LNFIYLFYLYFWRQSRFLSKL*CSGA NMTHLSLNLPGSRNTPAPALQAAGTTG M*HHTWLIFVVFVETEFHHVGLKFLSLD IHPPWPSKVLG*QGGWIV
1327	9378	A	229	28	359	KGKIPWLCGI*PQNEKLM*HSKSLATVFC IYR/TN*KNKRIISINAEKAIDQIHTFMNF LKNF/MKTVRKLKMDGSILNIKEICERP TNM*DGELLDDFPKIGDEAQRPP
1328	9379	A	2291	1	774	
1329	9380	C	2292	214	483	
1330	9381	A	2293	701	1033	
1331	9382	A	2294	440	1383	SSSWNRAFSRKKDKTWMHTPEALSKHFI PYNAKFLGSTVEQPKGTEVVRDAVRK LKFAHIIKSSGGQKIPKVELQISIYGSK NS*DPKTKREVQHNCQLHRISFCADDKT DKRIFTFICKDSESNKHLCYVFDSEKCA EEITLTIGQAFDLAYRKFLSEGGKDVETR KQIAGLQKRIQDLETENMELKNKVQDLE NQLRITQVSAPPAGSMTPKSPSTDIFDMI PFSPISHQSSMPTRNGTQPPVPSPRSTEIK RDLFGAEPFDFNCGAADFPDIQSKLDE M/QAPEMEGFKMGLTLEGTVFCLDPLDS RC
1332	9383	A	2295	412	842	GKVSPPGL*GP*GEQGPLGPSGAATGLP HSLCPEAFASPRSVEYR*DQAQLALWAV PL*EGPL/PDLVRGVVPGSPVKVPGDEV T/CHSCGRFPRALGQSKTLPPNPLTTRR GVNSEDLPSPVYRAADRGNRFPAGVGG SCHR
1333	9384	A	2296	1036	1429	GRAWRTCPCRAHQPRRSHLRPSSCSTLQ RG*SPPPGRSSSPVQP*CA*ARGWGS GPG*HWTCLFLAWQSPQCTGPQICQYPRPLR SPRPAGPPGGTSGHSPPDARAPRRPAP CGRECSSSSGRNAAPLG
1334	9385	A	2297	44	396	
1335	9386	A	2298	298	409	

1336	9387	A	2299	123	1221	KRQLFPLSWAMAASGSRMAQKTWEELA NNMQEAQSIDEIYKYDKKQQQEILGGEA LD*GVRSHHYFKYCKNSALALLKMMVM HARS/GEGNLEVMLGLMLGK/VWDGETM IIMGKFFFCLVEGTETRVN/SLQAAAYEY MAAYIENANQV\GSPENAIGWYHSHPG\ YGCWLSGNDVSTQML\NQQFQEPFVAV\ VIDPTRTISAGKVNFGAFWAHPK/GGYN PPDEGPASGVPGLFPLNKIEDLGVHCKQY YALEVSYFKSLLGSQNCLELLWNKIWG GIRWSS/SLAGLLNADYPTGQVL*FVLKK LEQSRSPSLGRGEFPCWGLETHD\RKSED KLAKA\TRSS\CKLPIEANHGLMS\QVIKD KLFNQINIS
1337	9388	A	23	3	438	LFISLLISEKIIENCWV*LSAARS*ALRKL AFF*ATRSFF*ARDILGRFHLFF/CNFFLG LLFIDWILSYSSMSFLIHLHPAGQQQAS TICCSIIICQANLHTIFWQFVCIRCADYHIP LYTGISNLTNDISVCHTINYHPVIGVW
1338	9389	A	230	1216	2017	HPRGAKYPETNPGFVTL SYVGPPDSRQL THSRPSRSENACGHRPGEINWLNCSGCL LVPRGKRVWTETCNLVWKEASGPPPG DPLPSLSPITHTQARPT/DTQAHCPAPCP PH*PLALNPQONFCPEESAAQVQGGEED RTSRGWWHGSQPQVGAGK*PLSTGSKA QGARLTGGGVPSRRLR*EQALVRCRCRL CRLGSCVRSHSLKFIDEAGEAPSAAGLD GQGTGRAPGAPEARCPRAESGEGPGSG QAPAEQDPQPRAALRA
1339	9390	A	2300	2	433	
1340	9391	A	2301	1	2423	MAGALAGLAAGLQVPRVAPSPDSDDT DSEDPSLRRSAGGLLRSQVIHSGHFMVSS PHSDSLPRRRDQEGSVGSPDFGPRSIDPT LTRLFECLSLAYSGKLVSPKWKNFKGLK LLCRDKIRLNNAIWRAWYIYVKKRKSP VCGFVTPLQGPEADAHKPEAVVLEGN YWKRRIEVVMREYHKWRIYYKKRVSGG GPGRPQSFPAAAGYRPPRKIPKGILTP ELAPLGPSIQSRADSATVWPQRLAASLP RGRLRKPSREDDLLAPKQAEGRWPPPEQ WCKQLFSSVVPVLLGDPEEEPGGRQLLD LNCFLSDISDTLFTMTQSGPSPLQLPPED AYVGNADMIQPDLTPLQPSLDDFMDISD FFTNSRLPQPPMPSNFPEPPSFSPVVDLSF SSGTLGPEVPPASSAMTHLSGHSRLQAR NSCPGLDSSAFLSSDFLLPEDPKPRLPPP PVPPPLLHYPPPAKQETVPEFPCTFLPPTP APTTPRPPPGPATLAPSRPLLVPKAERLSP PAPSGSERRLSGDLSSMPGPGTLSVRVSP PQPILSRGRPDSNKALLGSFLGSPNSLLPE TENRRITHISAEQKRRFNKLGFDTLHGL VSTLSAQPSLKVSKATTLQKTAEYILMLA QQUERAGLQEEAQQLR\DEIEELNAAINL CQQQLPATGVPI\THQRFDMRDMFD\D YVRTRTLHNWKFVWVSSLKPMAGGLQ GLWQGSSLTWAQFSILIRPLFESFNGMVS TASVHTLRQTS\AWLDQYCSLPALRPTV L\NSLRQLGTS\TIL\TDPGRIP*/EQATRA VTEGTLGKPL
1341	9392	A	2302	1	535	
1342	9393	A	2303	155	276	
1343	9394	A	2304	1	477	

1344	9395	A	2305	221	2323	LGLQMHTTSGRIHQAMVTSLNEDNESVT VEWIENGDTKGKIDLESIFSLNPDLVVP DGEIEPSPETPPPPASSAKVNKIVKNRRT VASIKNDPPSRDNRVVG SARARPSQFP EQSSSAQQNGSVSDISPVQAAKKEFGPP SRRRSNCVKEVDKLQDKREMKRLQQQE LREIRAQDVDATHPNYEIMCMIRGFTGS LDYRPLASADPIDEHRIYVCVRKRPLNK KETQMKDLDVITIPSKDVVMVHEPKQK VDLTRYLENQTFRFDYAFDDSAFNEMV YRFTARPLVV TIFERGMATCLAYGQTGS GKTHTMGGDFSGKNQDCSKGIYALAAR DVFLMLKKPNYKKLELQVYATFFEIYSG KVFDLLNRKTKLRVLEDGKQQVQVVG QEREVKCEDVLAKLIDIGNSCRTSGQTS ANAHSSRSHAVFQILRRKGKLGKFSLI DLAGNERGADTSSADRQTRLEGAEINKS LLALKECIRALGRNKPHTPFRASKLTQV LRDSFIGENSRTCMIATISPG/MWASCEN TLNLTLYANRVKELTVDP TAAAGDV RPIM HHPNQNDDLETQWGVGSSPQRDDLKL LCEQNEEEVSPQLFTFHEAVSQMVEMEE QVVEDHRAVFQESIRWLEDEKALLGD*L EEVDYDVDSYATQLEAILEQKIDILTEL DKVKSFRVAALQEEEQASKQINPKRPRA L
1345	9396	A	2306	264	451	VLPNLTVHASPTTIKIWAGKVTHAYNPS TLGGQGRGRIA*AQEFKTSLSNIMGLRLSK KKKKK
1346	9397	B	2307	1	642	MLEEQLVRMLTREVMDLITVCCVSKKG ADHSSAPPADGDDEEMMATEVTPSAMA ELTDLGKCLMKHEVLSGTLADAVTWL FTSVLKG LQMHGQHDGCMASLVHLAFQ IYEALRPRYLEIRAVMEQIPEIQKDSLQF DCKLLNPSLQKVADKRRKDQFKRLIAGC IGKPLGEQFRKEVHIKNLPSLFKKT K PML ETEVLNDNGGGLATIFEP*
1347	9398	A	2308	3	101	STHASESNFSICSILCFCLEAPISLMYLSA SLEDQPWAWALCGGGRAPSTT*PPLSL* HL
1348	9399	A	2309	360	483	SMCLTVSMLVTACPADPCVT*A*NRSSF EVPPPWTSDLRFF
1349	9400	A	231	5	399	DGVSLV/SPRLEYSGAISAHCKLRLPRFK *FSCLSIPSSWDYRHVPPPPANSVFLVKT GFHHVGGAGLELLTSGDLPTSA/FPKCW DYRCDHCAWAKD*KFKCVSVGRRGGP GEAVHQNSNRLSYWWEDGGKTG
1350	9401	A	2310	100	190	
1351	9402	A	2311	2	193	WRRRRRRFCPPQPSLIWSGMRSPKKLT PR*NYLRQALRRNLSTLRRPFAQETAWY QWCFLGL
1352	9403	A	2312	103	237	
1353	9404	A	2313	3	1361	VETQEGKTTIEGRITATPKESPNNPPNSG QCPICRWNLKHKYNYDDVLLLSQFIRPH GGMLPRKITGLCQEEHRKIEECVKMAHR AELQRELQRLSPLPATQVYYQITGLGFLK ELFRANPNSTGPLAKAQGGYLTRWAP GSVKPIYKKGPRWNRGEANRKAHFSTV QWPAPSAIAHAKDDVSPLQPTQCLLDNI KKKVPLSGRPGNTDSTCQESRSIYLS QALAVTFTHFLTATAEQAEPSSLSPPPG LGEKPPADLVLQW/SEAPRAKQHYCTSP SHPAQRRVSSSDSEHPAAASHPRRPPRP GTNGWSRRGSCRASWSRDCSGVRSRRV ALGMAMDQVNALCEQLVKA VTMMDP NSTQRYRLEALKFCEEFEKCPICVPCGL RLAEKTQVAIVRHFG LQILEHVVKFRWN GMSRLEKVYFEEQWSWNLIAGPFEHF GRGEPY

1354	9405	A	2314	138	397	SHCPLSMHVGGTRPSWWGGTGV* LWPRAC/RVGLLLPSTGAGGTLEALLSVSDTAS KVFEELARHCPSEGVNPTGHAHPVPSRG PFL
1355	9406	A	2315	16	546	QLNGRSIRHEVMShrkfsAPRHGSLGFL PRKRSSRHRGKVKSFPKDDPSKPVHLTA FLGYKAGMTHIVREVDRPGSKVNKKEV VEAVTIVETPPMVVVGIVGYVETPRGLR TFKTVFAEHISDE/CRLLPLRQKKAHLME IHVNGGTVAEKLDWARERLEQQVPVNP VFGQDEMIDVI
1356	9407	A	2316	2	451	PRAKAQKGSPVLWAQKSCPPKTTTRALA KVAACIGAWHPARVAFSVARVGQKGYH PRTEITKKIYKIGQGYLIK/DGKLIKNNNA STDYDLSDKSINPLSLLVQTKRRALEKID LKFDITTSKFGHGRFQTMEEKKAFMGPL KKDRIAKEEGA
1357	9408	A	2317	1	625	CKFIRVMAHTRLRLPLRRKKAHLMEIQ VNEGTVAEKLDWARERLEQQVPVNVQV GQDEMIDVIGVTGKGYKGVTSRWHTK KLPRKTHRGLRKVACKDGLIKNNAST DYDLSDKSINPLGGFVHYGEVTNDFVML KGCVVGTKKRVLTLRKSLLVQTKRRAL EKIDLKFIDTTSKFGHGRFQTMEEKKAF MGPLKKDRIAKEEGA
1358	9409	A	2318	1	1251	
1359	9410	A	2319	1	903	
1360	9411	A	232	481	525	AAGTYSL*IGKE*VKLSLSVDSMILYIDN LKTLPRKTLTDDKFSKISEYNISVF* CINDEKAEKEIRKTIPFTIKR*NTSDLTKKVKG LYKGNKYTKLMEINKWKDIPCA*IRRJN IKIVYPK*T*FKAISIKILLSFVTEIEKKIPK FI*NQKRIRIAKATLSCWNLFPMNSWHN RC
1361	9412	A	2320	1	1341	
1362	9413	A	2321	1	1131	
1363	9414	A	2322	10	1304	ESDGVTSHRKFSAPRHGTLGFLPRKRSSR HRGKAKSFPTDDPPKPGHLTGFLAYTAG MTHIVREVDRPGSKANTKEAGEAATIVE TPPMVSVGIVGYVETPRGLRFTKTVFAE HISDECKRRFYKNWHKSKKAFTKYCK KIWQDEDGKKQLEKDFSSMKKYCQV RVRAHTQMRLPLRQKKAHLMEIQV NGGPCGPRSWDWAREKLEQQVPVNVQV FQDEMIDVIGGDPGAKGYKRGSPVR WHTKKAAPARPHPRACAKVGLVLGAW HPGRVAFSVASRWGRKGLPFHRTEINQ GRIFKDWPRATLIKDGKLIKDQCLHLNY DLS*PRASNPLGGFVHYW*SDRNDFVM LKGICVVGTKKRGAPFRKSLLVQTKR RALEKIDLKFIDTTSKFGHGRFQTMEEK KAFMGPLKKDRIAKEEGA
1364	9415	A	2323	138	737	TTMSSKKAKTKTKKRPQRATSNVFA MFVHSQIQGVQRGPFNMIDQNRDGFHS DK/EKVLHDMLAFSREESPLDAYLDAM MNEAPGPHQVSPWFLTMFW*ESLNRTD PLKIVIQKPPFAICFD*KKATRHFPREDYL /REELLTNPWGDRVYQIEEVG*TCTGEAP I*QKKGNFQITSEFHHGILTGRPPKHDD LKELLA
1365	9416	A	2324	2	307	
1366	9417	A	2325	2	215	
1367	9418	A	2326	1	213	

1368	9419	A	2327	2	935	FRPRYEGRGRCGRVRLRRGLHVDC GKLGKNTLSSCGKPSSNRMSLQWTA TFLYAEVFFVLLCIPFISPKRWQKIFSR LVGVVSVPMGNTFF/VLVLIVLVLVIE CRAAKFREVMMDVDGKRVNLPGTIPGG HGEALSHMEAFSVAPGGNLLHWLGFSL LLASFLRLRLVTLISQQAITLLASNEAFK KQAEKC*VKAARKYMEENDQLKKGAP FDEGKLNFEAELKLEEKINRELKIANLQ KLKDELGGALSCKLEKG*KTSFWPMRK QFMRGLTQ/ERYDRLLLEQPKAAGLQV DGPMDKKEE
1369	9420	A	2328	2	1217	QARGASLRPSLLRIPSEYAFTMQLRLFR LLLAALLLVIVWTLFGPSGLGEELLTSL AFLLPAPALPGPPLALPRLIPTQEACCGP GAPPFLILGGTAPENLNQRNAIRASRGG LREARGLRVQTLFLLGEPNAQHPVWGS QGE*TGPSESAAGDILQAAFQDSYRNL TLKTLISGLNWAEEKHCPMARYVLRDDED GIANVPELVSELVLRGGRWGQWERSTEP QREAEQEGGQVLHSEEVPLLYLGRVHW RVNPSRTPGGRHRVSEEQWPHTWGPFP YASGTGYVLSASAVQLILKVASRAPLLP LEDVFGVSARRGGLAPTQCVKLAIGA THYPLDRCCYGKFLLTSHKLDPWKMQE AWKLVGGSNDGEKDCAPFAPWFGKSL GILRCRAIAIWLQS
1370	9421	A	2329	1	395	AINYNEKIYELRVMETKPKDKAVSIIECD MNVDFDAP/LGYKEPERQVQHEESTE ADHSGYAGE/LGFRASGSGNRLDGKKK GVEPSPIKPGDIKRGIPNYEFKLGAEAG GRFVAFSGEGQSLRKKGRKP
1371	9422	A	233	20	129	
1372	9423	A	2330	1	1494	
1373	9424	A	2331	2	1062	GRAVGGVSSLHCPERSGVCQVVSIMFSF NMFDPHPIPRVFQNRFTQYRCFSLSML AGPNDR/SSIGEKEGKIIMPPSALDQLSR L*HYRIPMLFKLTNRNSDRMTALLQCLE FVADEGICYFPTL/WMMQNLLLEEGGLV QVKS VNLSSATLLPNFQPSDFADITN PKAVFENALRNFACLATTGDVIATNYNE KILRNCVVMETQTPTRPVSHH*SVNH*T VDFDCFPLGLPKNPGKTKSHHEESEQKV KADPTVAYAWKSLGFPFRSGSGNRALD GKKKGVEPSPIKPGDIKRGIPNYEFK LGKITF/VSRSRPLVKKVEEDEAGGRF VAFSGEGQSLRKKGRKP
1374	9425	A	2332	1	214	APARSALCSGAPRTSGQPWGTAPAPPS FHQRNTPCPWSAPPSGAAPWGSTKGQR LDGPCCAPFPFRGLSM*SKVPWWPA*TA PAPPSFHQRNTPCPWSAPPSGAAPWGST KGQRLDGPCCAPFPFRGLSM
1375	9426	A	2333	1	1515	MAPLQQHIAVLPTTADQVTTEDDGYT WTALQHVATAKEKRKSSQTMESQDFP LHIPRPAQGTQRAVARPSFGPKAWTEAG PAKDAARSEKPGGRKAPGGRGQLTCRR SLSPVRQPPVSVVSDSLRRRSPCSPADW REAGATSLDRIRPILVLMVDKLVVVF STGAQGGSVARILLEDGTFFKVRVVT RKKAAKELRLQGAEEVVGDDQDDQVIME LALEWAYATFIGTNYWESCSQEVEVTP A/GSLDRIRPILVLMVDKKLGLHYVVS GLAGTSRS*RQGDWPPRTLTAKGRWRNI SGTLAFP*PVWGVFLANLENLLQLFFPR KTPEGKELLCGACPQVTFPWWMACPCLT WGPVVLISLFEADARKIRPEHRG*ALAGT RPRSTLPCSPSTPARSCTMPR*LPEDYEK LGFPGLDGLQHVFLCPETPTRDI/PSLT LRLNPKALTLDQWLGTARGLQPAVTL

						PASRPLVGIRGHQRGKKAPTSEIKPICSPK KKKK
1376	9427	A	2334	3	1037	ILRSVARAQRGRRSLRFHWSPGGHGGRS EAGAAGP/VEMRRTAAPQGRVPGL/PS KLGIPDALPTVAAPRPVCQRCQPLAAL VVQVYCPLEGSPFHRLLHVFACACPGCS TGGARSWKVFRSQCLQVPEREAQDAQK QGNSLAAEDWCEGADD/CGK*Y*GGAFT TVYLGFW*EQQC/HKT*TGLLGSKTS/C LQDAVLGAAHPVPPGLPLFLPYICVAD EDDYRDFVNLDAHSLRLDYQQREGIA MDQLLSQSLPNDGDEK/S*EDHN*KVGG SRPF*QIP*KRNWLLVREQILRVFPGVES HSF*PAPTSEVTELPVLPVWEAKRIFEF QLMPALGQHASRVLI
1377	9428	B	2337	240	387	NGKERGTGDVLLKHKEKGAIKLLMRR DKTLKICANHYITPMELKPNAX*
1378	9429	A	2338	1	152	
1379	9430	A	2339	1	830	MRRPRRRLCWLRLVECGPLQSRSAVG NSEEQRKAYVFFSSLSLVDTHEDHDTST ENTDESNDHPQFEPVSLPEQENKLEED EELFKMRAKLRFASENDLPWEWKERG TGDVLLKHKEKGAIKLLMRRDKDP *KICANPLPSRPLMGAESPTAGRRSPVW VLETPHADFRPNECPPSPPLPGPRFLN A*RMPQKFQNSFEELQGRSEGEKEE SRFQKNDL/HRKKCAEKPSSLR*REE TKEDAEAEAINRLILLSFSSLSLS
1380	9431	A	234	16	370	
1381	9432	C	2340	392	631	MRTAESCRRLSWAALLGSHWRCCSHPC AAGQGPYPRAAVNGPRTPLAYLRFKEM FSSGLINVEFPQFLYLSHFHSLLLR*
1382	9433	A	2341	3	121	
1383	9434	A	2342	1	2970	
1384	9435	A	2343	48	1493	DGQYRIWWLIEWHVDGGCGDTETWKD R\WNHVKK\FLERSGPFTHPDEFESTESL QFLDTC\VLVIGAGGALGCELLKNLAL S\GFRQIHVID\MDT\DVSNS*IRQFLFRPK DIGRPAEVAEFLNDRVPNCNVVPHF NKIQDFNDTFYRQFHIVCGTGTLSA RRWINGMLISLALNYERMVS*DPSSIVPLI D\GGTEGFKENARVILPGMTACIECTLE LYPPQVNFPMCTIASMPRLPEHCNEYVG MLQWPKEQPFGEVPLDGDDEHIQWI FQKSLERASQYNIRGVTYRLTQGVVKRII PAVASTNAVIAAVCAT*/EVFKIATSAYIP L*IITWVFNDV\DGLYTYTFEGRKGK\EN CPACISQLPQNISVFLHQAKLQ\EVLGILT NSASLQNEILPATTATLGGEKIGTLYLQS VTSIEERTRPNLS\KTIGRIGGLLDGPKTG RLLDVTT\QT\VLFTSILLKKGKSP
1385	9436	C	2344	166	312	

1386	9437	B	2345	355	487	MLGLRSGIPAPVRLQLAVVLGNSLGNFG TEGPGLKGRTMVTGDPX*
1387	9438	A	2346	754	1035	GKVRTVKIKYWMLARSSGSSL*SQHFGR LRQADHEVQEIKHHPGKHSANPSLLKI QKVS*LVSQA WWWVPVPAIREVEAGE WCEPGRQSLQ
1388	9439	B	2347	80	432	MANGPRAXFCENFQAALALSRVGLHKN PEKEPYKSKYSARALLEEVKALLGPAPE DEDERPEAEDGPGAGDHALGLPVAQRA VRLAVIEFHLGVNHIDTEELSAGEEHLVK CLRLLR*
1389	9440	A	2348	2	1060	HWLSTANVISDYDKSSPTQDTAETV*D TPELYHQKGGEIARCWIKYCLTLMQNA QLSMQDNI*ELDLKQSELIARKKELDE EESIRKKAVQFGTGELCDASAEKVS LRPLDFEEARELFLGQHYVFEAEFFQI DGYVTDHIEVVQDHSALFKVLAFETDM ERRCKMHKRRIAMLEPLTVDLNPQYYL LVNRQIQFEIAHAYYDMMDLKVAIADRL RDPDSHIVKKINNLSALKYYQLFLDS LRDPNKVFPEHIGEDVLRPAMLA KFRVA RLYGKIITADPKELNLSLEHYKFIV DYCEKHPEAAQIEVELELSKEMVSLFP TKMERFR TKMALS
1390	9441	A	2349	11	2571	VKCRKAEGRRSRLQTFEESQAVEAAM ANVPWAEVCEKFQAALALSRVELHKNP EKEPYKSKYSARANMEEVKALLGPAPE DEDERPEAEDGPGAGDHALGLPAEVVE PEGPVAQANRLRLAVNEFHLGVNHIDTE ELSAGEEHLVKCLRLRLRYRLSHDCISLC IQAQNNLGIVWSEREEIETAQAYLESSEA LYNQYMKEVGSPLDPTERFLPEEEKLT VEQERSTRFSKVYTHILYYLAQVYQHLE CFETA AHYCHSTLKRQLEHNAYHPIEW AINAATLSQFYINKLCFMEARHCLSAAN VIFGQTGKISATEDTPESEGEVPELYHQR KGEIARCWIKYLF*LLMQNAQLSMQDNI GELDLKQSELRALRKKELDEESIRKK AVQFGTGELCDASAVEEKVSYLRLPG FEEARELFLGQHYVFERAKEFFQIDGY VTDHIEVVQDHSALFKVLAFETDMER RCVMHMKRGLAMLEPLTVDLNPQYYLL VNRQIQFEIAHAYYDMMDLKVAIADRL RDPDSHIVKKINNLSALKYYQLFLDS LRDPNKVFPEHIGEDVLRPAMLA KFRVA VARLYGKIITADPKERAGKIWATSLAEH YKFIVDYC/EKRHPEAAQIEVELELSKE MPGRRSETPSLKERNKKDKIQ TAKTTSA PPAQLALATPQPVRMCRQLTRVISLGSS KGKASFAGPDRPPYEDPHIVRLQLYHPQ RERSCVTSSRRSCAKSPWTLSSRRWPHGS SWEKSYELSDGQVITSSNKR FHCPEALF QPSFLGMESCGIYKTTFKSIVKCDVDIHK DLYANTVLSGSTMYPGIALQDAEGDHC PGSQHEEDQDHCSF
1391	9442	A	235	1	1125	
1392	9443	A	2350	1	421	GTVMGLPKYFISLSTKFPLSFLSADEL HIASLFLWPRSKPFGVIQRSCASQNLALP EVLKNPGDPDKMLRFAESPRNLPAGVL GDIWTDGKGSVSLQEQVYHFPLIRPTGS *ARASFLSCG*EEFRRHGLTFSSTRE

1393	9444	B	2351	211	1632	MSTELFSSTREEGSSGSGPSFRSNQRKML NLLLERDTSFTVCPDVPRTPVGKFLGDS ANLSILSGGTPKCCLDLSNLSSGEITATQ LTTSADLDETGHLDSSGLQEVHLAGMN HDQHLMKCSPAQLLCSTPNGLDRGHRK RDAMCSSSANKENDNGNLVDSEMKYLG SPITTVPKLDKNPNLGEDQAEISDELME FSLKDQEAQVSRSGLYRSPMPENLNRP RLKQVEKFKDNTIPDKVKKKYFSGQGK LRKGLCLKKTVSLCDITITQMLEEDSNQ GHLIGDFSKVCALPTVSGKHQDLKYVNP ETVAALLSGKFQGLIEKFYVIDCRYPY LGGHIQGALNLYSQEELFNFFLKKPIVPL DTQKRIIVFHCEPSSERGPRMCRCLREE DRSLNQYPALYYPELYLKGGYRDFPPE YMELCEPQSYCPMHQDHKTLLRCRS QSKVQEGERQLREQIALLVKDMSP*
1394	9445	A	2352	200	1525	IMASAHLATSAFCTRSSSSGRSGSCKRGS WDSEQALIRAWTTLPSLHAADGSFAGG RGIPSKRWSWRAGQQSSLCLIMQTSNC GNSFQLVSEGASWRGLPHCSCAELQDSL NFSYHPSGLSLSVRPSSPGNSPKEQFSSQ VLRPEPPDPEKLPVPPAPPSKRHRCSLSV PVDLSRWQPVWRPAPSKLWTPIKHRGS GGGGGPQVPHQSPPKRVSSLRFLTSSQC LFSMCPSSQTLQPSFLQPGGPSSSRPCA ASPQSGSWESDAESLSPCPPQRRFSLSPS LGPQASRFLPSARSSPASSPELPLAT*G/L SATFPESRSQPCDLARKTGKRRHEED PRRLRPSLDFDKMNQKPYSGGLCLQETA REGSSISPPWFMACSPPLSASCPTGGSS QVLSESEKEEEGAVRWGRQALSKRTL QRDFGDLNLNLIEN
1395	9446	A	2353	2	280	
1396	9447	A	2354	2	971	
1397	9448	A	2355	604	876	SLHHKDFTGMLLLQFAHHLGEIGFSLLIS PKSRQPRFLPSVRQCGAAAA/RRCYRL APRPVCSGKRRTAPGAGD*GGERARPPR ARVFCPR
1398	9449	A	2356	1	1042	DLFRRHFKSSSIQRSAAAAAATRTARQH PPADSSVTMEDMNEYSNIEEFAEGSKIN ASKNQDDGKMFIGGLSWDTSKKDLTE YLSRFGEVVDCTIKTDPVTGRSRGFGFV LFKDAASVDKVLKEHKLIDPKR AKALKGKEPPKKVFGGLSPDTSEEQIK EYFGAFGERENIEFSMDTKTNERRGFCFI TYTDEEPVKLLESTYHQIGSGKCEIKV AQPKEVYRQQQQQKGGRGAAAGGRG GTRGRGRGQGNWNQGFNNYDQGY GNYNSAYGGDQNYSGYGYDYTGYN YGNPMEYGTGRGYGQTYQWPQQSTLMG KASRGGGQSTQNNYPAHT
1399	9450	A	2357	586	1970	PQFTPLRFSLLILFSQARVPSRVASLLA GRAAMEVPPRLSHVPPPLFPSAPATLASR SLSHWRPRPRQLAPLLPSLAPSSARQG ARRAQRHVTAQQPSRLAGGAAIKGGRR RRPDLFRRHFKSSSIQRSAAAAAATRTA RQHPPADSSVTMEDMNEYSNIEEFAEGS KINASKNQDDGKMFIGGLSWDTSKKDL LTEYLSRFGEVVDCTIKTDPVTGRSRGF GFVLKDAASVDKVLGT*KGHKLIDGKL IDPKRAKALKGKEPSPKRFLWSGLSPDTS VEEQIKEYFGAFGEIENIELPMDTKTNER RGFCFITYTDEEPVKLLESRYHQIGSGI KCEIKGCTTPKRYLGQQQQPPKGC/RG AAAGGRVGTGRGRSQQGNWTQGFNN YYDQGYGNYNSAYGGDQNYSGYGGYD YTGYNYGNYGYGQGYADYSQQSTYG KASRGGGNHQNYYQPY

1400	9451	A	2358	592	608	WLRWATTYKAGQPQLEAQNPSYFREGQ PFLRLDHLRTAGAEQNCAAAVWVRRL* RNMGFVLLTGAAVAFIMVAHLHQCSQG PAKKVPKWEYPYPTATEPLNNGHHPST CIQAKPHPRNTVGKV*PSPSLFFPSLLGG VYHPAV*ASWPWAWPWICWTEFLYAY GLLHGENPSKRSPRSPWGSIALLAFGWG TTVCSGFPSILVWVKVSGLGQVEPKACH LKKL
1401	9452	A	2359	857	1343	SFRISSEFGIITFKIVSFGIMAQTHAMGQFF ERNVSP*LTQGEIENLNRPIPVKL/ESITNN LL**KAPGLDGFTDD*SNIEINL*PRNLSL KFFFLRKKSYQFSTIASKKIEAKGTHPN* L*ETSITLILKSDKDMTRKGKQLSLINIDA KILNKILANQMQ
1402	9453	A	236	426	2173	MRAQTHNRAVDIALGTAGAHLEDPGAQ QGQDRCSWQVCRSARRRRRREAAGRR AARRAQHPCCREPSGNQSLSAHLTGAT KGPASSLLHEHLWKPIARSARLPGNSSPL FSAPCSMGAGPSLLAALLLLSGDGAV RCDTPANCTYLDLLGTWVFQVGSQSGS RDVNCVSMGPQEKKVVVYLQKLDTA DDLGNFAGHFTIYNQGFIVLNDYKWF AFFKYKEEGSKVTTCNETMTGWVHD VLGRNWVFFTGKKVGTASENVYVNTA HLKNSQEKYSNRLYKYDHNFKAINAIQ KSWTATTYMEYETLTGLDMIRRSGGHS RKIPRPKPAPLTAIEIQKILHLPTSWDWR NVHGINFVSPVRNQASCGSCYSFASMG MLEARIRILTNNSTPILSPQEVVSCSQY AQGCEGGFPYLIAGKYAQDFGLVEEACF PYTGTDSPCKMKEDCFRYYSEYHYVG GFYGGCNEALMKLELVHHGPMVAFAFEV YDDFLHYKKGIYHHTGLRDPFNPFLT HAVLLVGYGTDSASGMDYWIVKNSWG TGWGENGYFRIRRGTDCAIESIAVAATP IPKL
1403	9454	A	2360	84	326	DKAYQCSDDCK/ELHSVTLVSR*SVLSM HQSIHIWKKKLCFLK/CHKAFSQ*SALII KQRIHVAQII*ICCIWESLQPEVVL
1404	9455	A	2361	635	1170	RLFKCILGLLTFPPDSSHPQLPGESPGSFE KSRCPCGWPHPAQPHQSRWAIGPACSSY SGVLQG*EPQI*SLQHGRGGGGRTGGLE KETRTGSRISDTALGG/EAGPCPCGQLPH LPGPPAAHDAGPYIP/PKGPGGSGYLHP HGSAKLGSNQGAMKQAGRTGSAGSQG SAEFHKAALWT
1405	9456	A	2365	2	333	EPVCATWKNRTPEPTRQCRPAEKQRASA TQHQEGRQPGWKPRRSSDPHRPRGFSS THDVSD*PK/TNCREAKGEEAGSGLPTGT GIGGSKPSNRLRSTHTTTPGTVFNT
1406	9457	A	2366	208	491	KQSQVWCVLWSEGLLGLDPPNPSSACG GDRLS/RTSAVPPVP*S*NSSAHGPGGRP GKPQGWG*TVTSGRSVAGKPGVPSNRR CFLPPHPWLLDN
1407	9458	A	2367	2	1010	PQPAQPCPGKELRTVNGSQMLLVLLV SWLPHWGAISLAESAASRA/SFPGPSELQ LRRTSKIPKSLRKR/YEDLLNPGCGPNQS WEDSNTDLVPAPAVRNLTPVRLGSGG HLHLRISRAALPEGLPEASRLHRLFRLS PTASRSWDVTRPLRRQLSLARPHGPALH LRLSPPSSQSDQLLAESSARPQLEHL RPQAARGRRRARASNGDHCPLGPGRCC RLHTVRASLEDLWADWVLSPREVQ VT/LCAIGACPSQFPGRQKMHAEKSTN PAPALKAPNTVPKRPCLVPRQLQIPWVL HSKRPTDGVCFQDL/SD*LVKPKTCHLH Y

1408	9459	A	2368	68	430	HVLT AHP PPHRLGPGPQGRSGMGREL V GPTVCLSSL PRLAASFPRPP/VGLGPQQV QVVNGGCWPCRGY GEGTQAPQPPS*VG DPGEPNPQAPGAQSSTPKPAHIPPTQEA GRRWEGKWFF
1409	9460	A	2369	694	872	VCPGTGGE*GLW GQLGGLPKETPLKPM DAFTGSG LKRKFDDVDVGSSVSNSDDEI SSSDSADSCDSLNPPTTASFTPTSILKRQK QLRRKNVRFDQVT VYYFARRQGFTSVPS QGGSSLGMAQRHNSVRSYTLCEFAQEQ EVNHREILREHLKEEKLHAKKMKLTKN GTVESVEADGLTDDVSDDEDIDVENVEV DDYFFLQPSA PKRRRALLRASGVHRIDA EEKQELRAIRLSREECGDCRLYCDPEA CACSQAGIKCQVS DRMSFPCGCSRDCG GNMAGRIEFNPIRV RTHYLHAIMKLELES KRQ\GAAQQPQ*GALPDCQLQPDSTGP *DPLTWHLIPAWLQAHASGSQYSRQSQP HSSRRRRMARSSCFSSASIRCTPEALSRA RLRLVGRWLQEEVIIHLHIFHINIFI
1410	9461	A	237	3	463	GTRFLHSFLSSLKHGCGPSLLLAALLLS PGDGA\VRCDTPANCTYLDLLGTWVFQ\ VGSS\GSQRDVNCSVMGPQRKKK*VVY : LQK\LDTA\YDDLGN SGHFTIYNQGF EI VLNDYKWFAFFKDVTFISHLFMQLGT VGIYDLPHLRNKAGY
1411	9462	A	2370	2	295	
1412	9463	A	2371	2	345	
1413	9464	A	2372	156	1437	GIETRRPWGRPYVAWLLV VMDALVEDD ICILNHEKAHKRDTVTPVS IIL/PGDESVA\ SHFALVTPYEDIKKRLKDSRKRTSFLKK RIRFLEEKLI/GSDLKKKQVT*GREQV NK AYHAYREVCNDRONLKS KLDKMNKDN SES LKVLNEQLQSKEVELLQRTEVETQ QVMRNLNPPSIQTGEVGVGAGDLKIH GFGNQELELMRKECSDLKIELQKAKQTD PYQEDNLKSRDLQKLSISSDNMQHAYW\ ELKERKCLNLHLVTSSYKLELLRKT*KT\ STAIKK\ACAPVGC\VEDLGRDSTKLHL DGFL LATYARHP LLPNGKALCHTTSSP LPGDVKVLSEKAILQSWTDNERSIPNDG Y/DAFREHSSYGQNSLEDNSWGIFQSPPK /SQSETAFGETKTKTLP LPLPHYL DQ HNQNC LYKN
1414	9465	A	2373	28	405	FLYDPAPPFLSIYPKELKVES*IDTCTLFI AALF/LIGKRWK*PKYPLTDEWINK/VWY INTIEYY/SHLKRKDILTHYTTWVNREDLI LSEISQSQKINTVESTYMRYKYSISNS*ISIG TSYKSHRV
1415	9466	A	2374	1414	1607	DRVSLWLPRLC SGAI SAHCNLCFSGLS NSPTSASRVAGTTGACHHTLLI*FLFV FV VVVFETES/HLWLPRLC SGAI SAHCNLC FSGLSNSPTSASRVAGTTGACHHTLLIFV FLVEMGFHHVGK
1416	9467	A	2375	558	985	KKDPRWALYSLYVYKFLHFSYSSAKNP DGCFFQKVLNGFTKFFCKEQYCKLLKLY FYRLFALLWILCLSGFLKFFFYSEIMELV LAAAGALLFC/GNFIIYDTHSLMHKLSPE EYVLA AISLYLDIINLFLHLLRFLEAVNK K
1417	9468	A	2376	664	937	VLLILFSNINIFL*SLPY SFFIGEDNGSWV LAAAGALLFCGDSSSMDTHSLDGINWS PEEYVLA AISLYLDIINLFLHLLRFLEAVN KK

1418	9469	A	2377	1	739	DPTPVTFRSSLKNDSTNGSSVASVATVHIE WAFRLKVYSILSLQVLLTTVTSPVFLVYF ESVRTFVHESPALILLFALGSLGLNFALT LNRHKYPLNLYLLFGFTLLEALTVAVV VTFYDVYIILQAFILTTTVFFWFDCVYS YQSKKDFSXKFGAGLFALLVG*LCLSGF LKVFFFYSEIMELALAAAGAPFPVDFII YDTHSLMHKLASPEEYVLA AISLYLADII NLFLHLLRFPGSQLNKK
1419	9470	A	2378	272	1668	AMSQGSVTFRDVAIDFSQEEWKWLQPA QRDVYRCVMLENYGHLVSLAGLSISKPA DVVSLLEQGKEPW/VWGKREVKRDIFS VSESSGENQGLFHQKNVIYDGLHPSI*IM ERNKVKAPVYSSFKGGWKCDHTEML QENQGCIRKVTVSHQEALAHMNISTVE RPYGCHCGKTFGRFSLVLHQRTHTGE KPYACRACGKTFSQISNLVKHQMHTG KKPHECKDCNKTFSLYSLFIEHQRTHTG EKPYECTECGKAFSRASNLTRHQRIHIGK KQYICRKCCKAFSSGSELIRHQIHTGEK PYECIECGKAFRRFSPLTRHQSIHTTKTP YECNECRKAFRCHSFLIKHQRIHAGEKL YECDECGKVFTWHASLIQHTKSHTGEKP YACAE*NKAFSRSFSLILHQRTHTGEEP YVCKVCNKSFWSNLAKHQRTHTLDN PYEYENSFNYHSFLTEHQ
1420	9471	A	2379	1322	1644	HLELFLGIRGIKMFVGTWNE*EEKAGLN GSRL*SQHFGKPRWVDH/LRSGVRDQSV GQHGKTSSLQKNKTSWAWWRAPVVP AT*EAEVGGWLEPRGGGCSEAVSGAF
1421	9472	A	238	12	362	DRVSLSPRLECNSAIPAHCPCLP/GFK QFSCSLPSSWG*RCLPPRLANFLY/SLVE IGFHHVGGAGLKLTTSCDPPTSA/FPKCW DYRHEPQ/WPDL*LTSE*GYRYEDSFDFL PKVPI
1422	9473	A	2380	319	724	EASLDLAPNISPPKTSCLPTGCCSFTQT WMPQSKVFIHGPEQGPWDWALGTDLTA LPFKARNMPNLDTAGLPSIALRLTVNHR RSPGSQELSCLPDSCLSQ/PPQPC*GSLLP LEYKCTPKEALRK*KRLSFLFV
1423	9474	A	2381	38	704	SSEEEQSRFSSWHQGDPAVTWKWLPK VPPRWRFSHFPLDSPWHFLLQTAVTPLP QISAAPPKPLLPPTSPLAFFSLLTDLPLYL HPQGFSAGATAWKASVHNRTRALQSHS SPEGKEEP*TPYPELEYIPRKRGNPHG KLVGTGLGHSAPCGYSFLFHPSPKRG GTRDRVEGRLKARQNRVCSNN/AGEYE EARRFKGLSSQSGPVPPDVGSGVQT
1424	9475	A	2382	107	449	
1425	9476	A	2383	68	422	
1426	9477	A	2384	54	859	LRRGRSRETNEEPPPTVQVQGPQOREE KOKTKMAKFVIRPATAADCSILRLIKEL AKYEMEEQVILTEKDLEDGFGHEHPFY HCLVAEVPKEHWTPEGYS*LRHVHGPS VYMDGRGGN*KILYTIK*MIMINEDTAL VGFAHVLIIYPMNPWDWQSYLYLEDFSV MSGYKGLGIGSEILRNLSPGCQ*RCRCS SKVFLVAEWQ*THPITFYKRRGASDLS Q*RRGWETCSKIGQGSTWLKIGQPEGVR ECCLLGWTTSHSYF
1427	9478	A	2387	112	861	NPGAAKMPAYHSSLMDPDTKLIGNM/A HLLPIRSQFKGPAPKRDTRIPDIVDEAIFL PSGPNVFFKNYEIKNEADRTLIYITLYISE CLKKLQK/CQFPKAQGEKEMYLGIPLN FPIPGEPGFSHFNANLCPNPANKQEDEA VMRAIYLPTSLRPRTLGLKTL*EKFFGPS RMDKPQQSGWTWLC*RDSFMNKSLSG PWTIEREPGAHRLPRGPGAAFFQQDVT QSFLYFSKVFIQKRRRACLYLKNS

1428	9479	A	2389	1	395	AKAKMADVLDLHEAGGEDFAMDEDGD ESIHKLKEKAKKRKGRGFG/SR*VWGKW GRVA**GRSYGFWSPHPPHRNNGRKEEF SVISCSLIEGSRARMREDYDSVEHDG DEPGPQRSVEGWILFVTGVHEEA
1429	9480	A	239	3	153	
1430	9481	A	2390	146	831	CLSGTDEISIEGEMADVLDLHEAGGEDF AMDEDGDESIHKLKEKAKKRKGRGFGS EEGSRARML*DYDSVEQDGDVPGPQRS VEGWILFVTGSP*RKPPEDIHDKFARIM GEIKNISSSTFDRRTG/YILKGTYLSNIET YKEAQAAMEGLNGQDLMGQPISVDWC FVRGPPKIGKRRGGRRRSRSPDRRPSLT GPLLSRCSLQDSIWTMAALGQIGLWEL CCVYI
1431	9482	A	2391	2	442	FYVILISVRELYLCHHLPFLCAGVYMTNS AMKVFLIWLIVKITVLEFKLSWPGAV VWF*GLILYTHI*TL/NTHI*VQNVCIYIL QRNK*FHRFCINIKSWLGAEPHACNPSTL GG*HS*IT*AKQFETSLGNIVRPCLYKKY KN
1432	9483	A	2392	2	425	RRANPPSISPSAQDSRVTPGEGPGSP/G* PSRPVS/GPA/PGSGGLRGSSAPATPLGE APSPSAIGPTPALQPCDPGAGP/GTARPG QTASAAPAPLPPRRGAGAPPQAGREGG PCGEEERPPSGREKVSC*KRQTGPGQRR ADK
1433	9484	A	2393	2	662	ACTAADLIAGTTISEAGPHMENQP/GEVA GPAGPPTPSWAPRIPLAPPWRAAAGRDP AT/GQEDSQ*PTPGCPSWPPWPTQLSPSA AGSPIHT/PPIQGFHSQLLS*RSPGTEEP*E ANKLPWTGHRPEPHPLPGHPCAAGS IGHWHLLLLCPLATLHGERQRHLHPGQR SGCGVQGRTPPGSAQIQDLPAAPSSILQN LSTQLCSAARPRSMPPASRMRM
1434	9485	A	2394	115	187	
1435	9486	A	2395	93	584	KHSASAAQALPGTLGACTSGGLRGSS APATPLGEAPSPAIGPTPALQPCDPGAG PVLPGQVKLPQQ/PPAPLPPRRGAGAPP PEIPSGSSFQYWEGGAQTPGLLPAQRPL PPFPALGSGCSALEEG*ATGTRGHKGG CS*GLWGEPGRAGKHPPHLL
1436	9487	A	2396	46	438	LQKRVGDWLGEAPPWGWVGSHRCRAR TARPGQTASAAPAPLPPRRGAGAPLAR VPAPPCCAQRAPPSSSQGRNQ**AASGP WRPPR/PGREVGTGEEERPASGREKDS C*ERQTGPGQRRRAVKMTQTR
1437	9488	A	2397	455	1241	ARELRAGGFYVPHRGLEMPETALEAG VSGVGLQHLPH/HLGEAPSPAWPDTQR CSRVIPVQGPVLPQVQKLPQQ/PPAPLPP RRGAGAPPLDLARVPAPPCCAQRAPP SSQGRNQ**AASGPWRPPRQAEKESNC GEEERPASGREKDSC*ERQNGARSAAGR QAKESPQTSRPPDGEPACEVAGPAPPTP SWAPRSPLAPPWRAAARDPATGRRTV SDPHRPAHHGLPGQHSYLLQLQDHLH SPIQGFHSQLLS
1438	9489	A	2398	2	328	PLFSDNGKKRGLALDGLKHEDTNLASS TIVKEGANKEVLGILVSYRVKVLVSR GGAPETDVPVDTNLIEFDNYATDDDIV FEDFARLRLKGMKDDDYDDQSTRP
1439	9490	A	2399	2	417	EIRAFCAKSLE*KSHKRNSVRLVIRKVQF APEKPGQPSAETTRHFLMSDRSLHLEAS LDK/EVRQYADICLFSTAQYKCPVAQLE QDDQVSPSSTFCKVYTTPLSDNREKRG LALDGLKHEDTNLAFSTIGKEGGH

1440	9491	A	24	497	752	DGVLLLLPRLECNSAILAHRNLRP/GFK RFSCLTLLSPWDYRHLPPRLAIFVFLVY VGFHHVGYAGLELLTSR*SARPRPPKIA
1441	9492	A	240	3	423	GSTHASARMAVMAPRTLLLLSGALAL TQTWAGSHSMRYFYTSGSRPGRGEPRFI AVGYVDDTQFVRFDSDAASQRMERAP WIEQEGPEYWDQETRNVKAQSQTDREV LGTLRGYYNQSEDGSHTIQIMYGCDVGP DGR
1442	9493	A	2400	188	340	GGALLKDPLGGPNLPGGGKDKFFSFWG AF*NPPGDFWEGTFFLGGGILGP
1443	9494	A	2401	117	457	
1444	9495	A	2402	39	447	
1445	9496	A	2403	3	1359	FPGRRFRGGAGILAAGEEAASEPRTERA AGARTMGEKPGTRVFKKSSPNCKLTVY LGKRDFVDHLDKVDPVDPVVLVDPD/Y TMKDRKVFT/LSPCAFRYIGREDLDVL GLSFRKDLFIATYQAFPPVPNPPRPTRL QDRLLRKLQGAHPFFFTIPQNLPCSVTL QPGPEDTGKACGVDFEIRAFCAKSLEEK GHKGTSVRLVIRKVQFAPEKPGQPQSAE TTRHFLMSDRSLHLEASLDKELYHGE LNVKCSFTNNSTKVTVQGRFKVSC*GQ YADIWPLSGTAQYKCPVAQLEQDDQVS PSSTFCKVYTITPLSDNREKPCIALADG KLKHEDTNLVSSTIVKEGANKEVLGILV SYRVKVKLVVSRGGDVSVLPFVLMHP KPHDHISLPRPQSAAPETDVPVDTNLIEI DTNYATDDDIVFEDFARLRLKGMKDDD YDDQLC
1446	9497	C	2406	933	1070	MKRKNILYYGTNKLNTNNLNNFINI LVSSLGLSERSFYRYIL*
1447	9498	A	2407	138	1166	VVAMAQVLRGTVTDFFGDERADAETL RKAMKGLGTDEESNLTLTSTRSNAQVRQ EISCS/AFKTLFGRDLDDDLKSELTGKF EKLIVALMKPSRVL*MLIELKHALKGVA GTNEKVLTEIIASRTPAELRAIKQVYEE EYGSSLED*RWLGDPGGYYPAGCWLVI LLQANRDPDAGIDEAQVEQDAQALFQ AGELAKWGTDEEKFITFGTWSWSSF*GK VFDKYMISRISKLRITDRETSQGFRSQ LLGCCGILFRYTSPTLQETFIYAMKEA GTDDHTLIRVMVSRSEIDLVIYIPGREFR KNFCHPPPYSMIKGRYIWGTIKKALLL CGEDD
1448	9499	A	2408	1	498	
1449	9500	C	2409	14	394	
1450	9501	B	241	1	540	MPVNXHKRHDTIAESLITPNVTDSVKD CIKELGNRLFLWTQGCSSHVATVAPPTA PRGLRVRSAVRPLPLGGWAAAMEGEP PVEERRRLQEELNEFVESGCRTLEEVTAS LGWDLDSLDPGEEAAELHQIRCQESWE FASSPFCALKLDTSDWDSTNSRIKGCHQ EVVTGNSCGH*
1451	9502	A	2410	2	353	
1452	9503	A	2411	1	349	
1453	9504	A	2412	123	195	SWKPSFSAN*HSNRKPNTACSHS
1454	9505	A	2413	240	743	
1455	9506	A	2414	284	672	GGWEGLTDTSYRRAPAGIRPVLQRKEQT VIFAVLQPLLVIPR*TASGVLDLQQT/GRP AEERPVRRTKKQONATTSTKGTPTQK PHSNVIRFKDERDMDEAGNHHSQQTNT GTENQTTTCSHSYVGVEQ

1456	9507	A	2415	579	1383	VGSCAFYLAVSVFLAPRPFLLHLLQLGAD EARSWDFLRSPEEFNTNMDIRPNHTIHI NNMNDKIKKEELKRSLYALFSQFGHV DIVALKTMKMRGQAFVIFKELGASSTNA LRQLQGFPFYGKPMRUIQYAKTGSDINS KMRGTFADKEKKKEKKKARTVDQTAT TTNKKPAGQGTNSAIPQGNSTTQIPQVP DYPSKLNIFYSLNKL TQRETNEMMLSHA V*ISSTWPSSEVPSGYPGRHDIAFIVEFEN IDGQAGAAIRDALQGF
1457	9508	A	2416	1186	1451	DLLKVLHEKPKLARRSGSHL*PR/HFGR RWKDCIKPGVQDHSGQYRESPSLQNIKK KIIWAWWWCMPIVPTTQAVKVGGSELEK RLRLQ
1458	9509	A	2417	1	412	
1459	9510	A	2418	298	532	MGSWSLPGRTLWKEKVRFLKSKERTNP GSNFFSFPQSQHTREERSQECLSLPVLPS YLATRLSLPDSCLPKGRKAH*QRHSEI*L MGFEPGWPGKL*GWIELAFLGCLHLTL PLPCPTPLPPKSTKSGCFSLSIALCFNKQF AVTK
1460	9511	A	2419	5	977	VRGGLAAGRGRGSAGAAPVVVAAMLG AWAVEGTAVALRLLLLLPPAIRGPGL GVAGVAGAAGAGLPESVIWAVNAGGEA HVDVHGIHFRKCIPL*GRVGRASDYGMK LPILRSNPEDQSCYQTEVRSNEETFGYESP IQREGGLTCWSLKFAEVYFAQSQQKVF DVRLNGHVVKDLDFDRVGHSTAHEI IPMSIRKGLSVQGEVSTLYTGNSNME/F VKGYL*PIPKVCALYIMAGTVDDVPKL QPHPG*ERKKGEEEEEEYDEGSIPKKNR PIKNGGQSGPRHNPTP*ASDNSSLMFPIL VAFGVFIPTLFLCLRL
1461	9512	B	242	232	387	MEGEPPPVEERRRLQEELNEFVESGCRT LEEVTASLGWDLDSLDPGEEAAE*
1462	9513	A	2420	1	453	RNSEKEVEKRKVALQEAKLKAGLNPD GTPALSTLGGFSPASKPSSPREVKAEKS PISINAKTVKKEPEDRQQASKSPYNGYN NRRSRSGTYSSRSRSHSESRRHHN HSSPHLKAKHTRDDLQSSNRHGHKRRK SRSRSQSKSR
1463	9514	A	2421	19	434	QRGNYSFEIVAMACINLASKIEAPRRIR DVINVFHHLRQLRGKRTSYIYQSLGDVE WYIEMKLSSWQQTSPILLDQNYINTKN QVIKAERRVLKELGFCVHVHHPHKIIVM YLQVLECERNQTLVQTAWVVDGIT
1464	9515	A	2422	171	437	TSNFYLSYNRRSRSGTYSSRSRSHS HSESRRHHNHGSPHLKAKHTRDDLKSS NRHGHIRKKSRSRSQSKSRDHSDAG*KH RLE

1465	9516	A	2423	21	1855	FPGRRFRLRWACVRLAKTMASGPHSTA TAAAAASSAAPSAGGSSSGTTTTTTTTT GGILIGDRLYSEVSLTIDHSLIPEERLSPTP SMQDGLDLPSETDLRILGCELIQAAGILL RLPQVAMATGQVLFHRRFFYSKSFVKHS FEIVAMACINLASKIEEAPRRIRDVINVF HHLRQLRGKRTPSPLILDQNYINTKHQVI KAERRVLKELGFCVHVKHPHKIIVMYLQ VLECERNQTLVQTAWNYMNDLSLRTNVF VRFQPETIACACIYLAARALQIPLPTRPH WFLFGTTEEVEIQEICIETLRLYTRKKPN YELLEKEVEKRKVALQEAKLKAKGLNP DGTPALST/LGVGFSPASKPFIHQENVKA GRRKSPIFHLMWKDSKKEPGG*D/RQA FPKALYNGVKEKDS/RRRSRNSRSASRS RSRTRSRSRSHTPRRHYNNRRSRSGITYS SSPRSRSPSHSESPRRHHNHGSPHLKAK HTRDDLKSSNRHGHKRKKSRSRSSQSKSR DHSDAAKKHR/HERGHHRDR/ERSRSF EEVP*KARHHGWVVRSGTWARAQGADL SSSLWSPAIQFLGFPIYQCDGMGLNPKT IKRKTGLGDFLETTPRSS
1466	9517	A	2424	1	1566	
1467	9518	A	2425	328	889	GLRTPAAYLYCGTVRTAGVAAASRYQG DNIYVKNLDDSIDDERLQKEFSFGTT*S AKGMMEGGHSGK/GFGFR/ICFSSPEEASK AGTELNGRTVATKPSYVALAQPKKECQ AHLNQHMQRMASVRAVPNHVMNPYK PAPPSGYLMTGIPETQNRPPRGAVGHPC NPSTLGGQEGKNTGSGDRDHPG
1468	9519	A	2426	1	2262	
1469	9520	A	2427	365	2419	FSIPVDFCPSALAPRSPPPGSGPQPRHLS SSHGKVAACGPAGSRAEMNPSAPSYPM ASLYVGDLHPDVTEAMLYEKFSPAGPIL SIRVCRDMITRRSLGYAYVNFQPADAE RALDTMNFVVIKGPVRIMWSQRDPSLR KSGVGNIFIKNLKSIDNKALYDTFSAFG NILSCKVVCDENGSKGYGFVHFETQEAA ERAIEKMNGMLLNDRKVFVGRFKSRKE REAELGARAKEFTNVYIKNFGEDMDDE RLKDLFGKFGPALSVMVTDESGKSKGF GFVSFERHEDAQKAVDEMNGKELNGKQ IYVGRAQKKVERQTELKRKFEQMKQDRI TRYQGVNLYVKNLDDGIDDERLRKEFS FGTTISAKVMMEGGRSKGFGVCFSSPE EATKAVTEMNGRIVATKPLYVALAQRK EERQAHLTNQYMORMASVRAVPNPVIN PYQPAPPSGYFMAAIPQD*DRAAYYPPS QIAQLRPSPRWTAQGARTVHPFQNMPGA IRPAAPRPFFSTMRPASSQVPRVMSTQR VANTSTQTMGPRPAAAAAATPAVRTV PQYKYAAGVRNPQQHLNAQPQVTMQQ PAVHVQGQEPLTASMLASAPPQEQQQM LGERLFPLIQAMHPTLAGKITGMLLEIDN SELHLMLESPELSRSKVDEAVAVLQAHQ AKEAAQKAVNSATGVPTV
1470	9521	A	2428	2	237	
1471	9522	A	2429	68	866	GSTGAVTAATATAATAAGASAPLGLPV YLPAPRSTAPAPSPAASALLFLVTPPSRP ERLPSHQPPSATMATAPYNYSYIFKYIII GDMGVGKSCALLHQFTEKKFMG*FVPH TIGCWNLGTRNIESLVGQKIKLQIWGLR QGQERLRAVYT/RAYYRGAAGALMVY DITRRSTYNHLSSWLTRCQGISPNPKYW **FSIGN*SQIWRPQRDVTYEEAKQFAEE NGLLFLEASAKTGRRIVEDAFPLRACPR KIYQNIQDGKLGs

1472	9523	A	243	1124	1394	ACDDWNRMDKSHLHPPPPFPRDPDYV GPSGTRSPPTSGSRSPNRNSAPPAPAA PPQVQARPP*HSPPDKRKRPNCRTRGSP PWFRS
1473	9524	A	2430	229	593	SLICFVGVGDCAEFWVTRLAPRAEKRR LAPAVPPHHQDERGGTSTPHFHNLSHG WVTFPALLPQYDILPLNSFLHEIQEPSL SGLGPFSCNTYLISFSSTCHLAPVINLWA LPGASIM
1474	9525	A	2431	594	829	PCALVPLRPYATK*GMLPWLLGLHLS RAFAVALDHILF*VL/CHV*IPSILTKIFEN GYFVISVLLMRNILSSSALL
1475	9526	A	2432	1479	1734	LKVNISLGMVGHACNPSTLGSQE*ATVP LILYFLNKLAFTHSHCGITLNSFLHKIQEPS LG\SRLGPLSCNYHATALQPGQQSKALS
1476	9527	A	2433	30	508	
1477	9528	A	2434	338	853	EGRGFGRAGLPPLCIAALFQFKMNYMPG TA\TLIED\DKKHLVLLRDGRTHIGFLARS IDQFANLVLHQTVRIHVQK/YTGDIPR GIFVVRIGENVVLLGEIDLEKESDTP\Q QVSH*RKFLQKGNQ/QTKLEAEKL KVQ\ALKDRGLSIPRADTFDKDLFFCPEA VGS
1478	9529	A	2435	357	893	TVFQIWANHPGQRPARQLCPVHLLGGQS HQEPRHTSNSEPSRASASLRLTPLKPTG IGPGSQILED RDRRAFT*WGDYFWGKGA PACLIQDGVKGQWAGPHSGVGGVGP APRACPPVFSPOGPQSSACGCQYYLSRP KAYPQGWGRGGDPPGQNVRSVCDLRC CMWTLNCTCSF
1479	9530	A	2436	233	566	RLFLVRKRMISFSAPPLMLPFSFYFFVC PAARTARKRKPSPEPEGEVGPCKINGEA QPWLSTSTGLKIPMTPTSSFVSPPTA* PHSNRTTPPEAAQNGQSPMAALIL
1480	9531	A	2437	219	702	ARKVRARAAGLESRTGSTGRPCATRC WRCTSTATRGPSRASFKKEPALTAVART ARKRKPSPEPEGEVRAPLRSTKAQPGC PHSTGLKIPMTPTSSFVSPPTASPHSN PGPHRLESGRMGQFPIGSPDLSSRQFRG QSCSKDANQVHSTTRNSN
1481	9532	A	2438	173	1136	ALEGAGKSRGFWRAGLGQQAQDRARH AAGRCTSTATSGPFESKFKEPALTAGR LFGVFEGQRGQGLKAVCKNSKGKSP LPEPRKVKSGPLKIQRGRPSRRL/SPHPQR GSRSP*LLHPLLCLRHHPPLPHIPTGPHRL KRPRMASPPWQP*S**QTMQGASHASKD ANPG\SLPTTRKE*PTVGPSSVLL*TKERL GPKRGGGPREQATQEDWEPVHPASLPDF LFGQPVAPLCCTLCHERLEDTHFVQCPS VPS\HKFCFP\CSSQGIKQQGS\SGEVYCP SG\DKCPCGLPMSPAWAFMQGEIATTLA GDVKVKKERDS
1482	9533	A	2439	1	206	PTRPRTSYEKQGYLLPPVFSIVLEVLR AISQETEIKSVQMGKEEVKLSL\FVCVYI YA*ENPVESTK
1483	9534	A	244	171	512	CTVGVRCTVFPTHEKLPVESHIVSRSE SVINKI*ANQIWEH/IKKIIHHEEVGFILGM QGWLNIRKAPTEIYHINR/SKDKNHMIILT /D*EKAFDKI*HYFILKTLDKLG*GNF

1484	9535	A	2440	611	1203	ERLLRVCLALGSAGTADDVKLHPVSCA DTARSTPGTSAPSTSGTSAPFTPGTSAPST PGTSAPSTPGTSAPSTPGTSAPSKPGTSAP STPGTSAPSKPGTSASSTPGTSAPSKPGTS APSTPGTSAPSKPGTSAPSTPGTSAPSKPG TSAPSTPGTSAPSTPGAPQHPPHGRGPQHPP SRGPQHPPHGRGPQHPPSRGPQHPPHLP QHPPSRGPQHPPHQPQHPPSRGPQHPP/ PPGTSAPSKPGTSAPSTPGTSAPSKPGTSA PSTPGTSAPSKPGTSASSTPGTSAPSKPGT SAPSTPGTSAPSKPGTSAPSTPGTSAPSKP GTSAPSTPGTSAPSKPGTSAPSKPGTSAPS KPGTSAPSKPGTSAPADPGVL
1485	9536	A	2441	447	920	GWHWFLASQKSLKPPLSRNPCLVLSCH MAQSWARTQEFLCPMCPTT/CAQSGTGT ESCFPNPN*VLGAGAPQPDQRCHKAGPF SSPGRFLPSSRHGGPVLPGLGPPGPPG RPPHKPSNEQRDAGQQLQLPPACQQK LPQLPFCLKFYSLPELPH
1486	9537	A	2442	1	374	LRKDDTQIREAFHIFVQSWRPALPSLPSL PLARALAE TLNQPFGLITPSGILLNSQ MLDFSWPNRTANHSAPS/TVVRPAEGLC GTYLALGANGAARGLSGLTQVLLNVLN *NRNLSDSLARG
1487	9538	A	2443	1	315	
1488	9539	A	2444	3	2027	NSRVDDFVARARMAAENEASQESALGA YSPVDYMSITSFRLPEDEPAPAPLRGR KDEDAFLGDPDTPDPSFLKSARLQRLPS SSSEMGSQDGSPLRETRKDPFSAAAEC SCRQDGLTVIVTACLTFATGVTVALVMQ IYFGDPQIFQQGAVVTDAARCTSLGIEVL SKQGSSVDAVAAALCLGIVAPHSSGLG GGGVMLVHDIRRNESHLDIFRESAPGAL REETLQRSWETKPGLLVGVPGMVKGLH EAHQLYGRLPWSQVLAFAAAVAQDGFN VTHDLARALAEQLPPNMSERFRETFLPF GRPPLPGSLLHRPDLAEVLDVLGTSGPA AFYAGGNLTLEMVAEAQHAGGVITEED FSNYSALVEKPCGVYRGHLVLSPPPH TGPALISALNILEGFNLTSLSVREQALHW VAETLKIALALASRLGDPVYDSTITESMD DMLSKVEAAYLRGHINDSQAAPAPLRP VYELDGAPAAAQVLFMGPDDEFIVPMVS SLNQPFGLITPSGILLNSQMLDFSWPN RTANLSAPSENSVQPGKRPLSFLPTVV RPAEGLCGTYLALGANGAARGLSGLTQ VRFTPWLAFSREPSCLDCRCLS*QSNL LQVDSECAETSWGGHRDR*RKDSSQG CPWVHGSRRTNNFIIAVKDPRSPDAAGA TIL
1489	9540	A	2445	83	310	IFQCKFTWDSQITPRLFHPAPPTWCRPL PVSG*RRVRGWTTROGSGGGRGPAPLS SQAPPKGPVPFQWHLRAEG
1490	9541	A	2446	1	1833	
1491	9542	A	2447	3355	3951	
1492	9543	A	2448	699	975	
1493	9544	A	2449	3	132	GRFSSESPRA\GPPAPHRGHVQRCCVS PTGLLIWKELERPFC
1494	9545	A	245	1	293	FLRWSLALSPSLECSGAISAHRL/RLPGS TNLPAISTSRVASTVGMATAPGLNFCIFS REG*VKHVGPGCLELPTSSDPLPLVSPK LRDYRPEPLCLA

1495	9546	A	2450	2	1734	TDLKRCTYYETCATYGLNVERVFQDVGI IDSAVPCSAQKVVALRKKQQLAIGPASH CPNSPKHWAVSAASIPAVHNTQATWGG GKAFSYSSSVSTPSISQRELNETIAAS STPTPIRKQSKRRSNIFTSRKGAOLDREK KAAECKVDSIGSGRAIPKQGILLKRSRK SLNKEWKKKYVTLCDNGLLTYHPSLHD YMQNIHGKEIDLLRTTVKVPKRLPRAT PATAPGTSPRANGLSVERSNTQLGGGGR GRGVV*ICGWVSLTGADVGTGEGFNGR RERELGFSVQAQILASLQGCCLQCQGG DFDLGNQNAALAVQAVRTVRGNSFCID CDAPNPDWASNLGALMCIECSGIHRHL GAHLSRVSLDLDWPELLAVMTAMG NALANSVWEGALGGYSKPGPDACREEK ERWIRAKYEQLFLAPLSSDVPLRQQL LRVVEDDLRLVMLLAHGSKEEVNET YGDGDGRTALHSSAMANVFTQLL/W GESRASSLP*PRSS*PCSLKATSSFLPYNQ SLSSHVLPVTNMCFLQYGVVRSRDAR GLTPLAYARRAGSQECA
1496	9547	A	2451	329	3294	ESEELWGEQLAGGPPQFALSNSAAIRA EIQRFSVHPNIYAIYDLIERIEDLALQNOI REHVISIEDSFVNSQIEWTLRSVPELKIV GIVGNLSSGKSALVHRYLTGGPIVQGG SPLKGGGLRSEIAADGHSYLLLRDEGGP VGELOYAAWVDAMVF/VWSPCEDGITFS KTVYNYFLRLCSFRNASEVPMVLGTQ DAISAAWPRVIDDSRARKLSTDLKRCTY YETCATYGLQCGSVSQDQV
1497	9548	A	2452	493	955	TLCTYILISEVISLPGTAFIQRKGLGRPS QNNAYSLSQTSPLIIFLRVQGFDLNLA LVLFSSGGTESRSIAQLECSGMTSAHCN LRFLGSSYSPASAS*VAGTTGACHHAQLI FLVFLVEKGFHRVSRDGLHLL/NLVRPP QPPKALGLOA
1498	9549	A	2453	158	720	PPPCRAKQHQTCKTKRPQRATSNVFM FDQSQIQEFKEAFNMIDPDQDGFIDARE DLHDMLASLGKNPT*WSILDAMMMRA PGPPSNFTPWPHHGFGEERLNGHQIPE DVHRKMPFACFE*KKPLGTIRVEDYLARE LLTTHGGIGFTDEEVELYREAPY*PKRG NFNYSEFTRILKHGAKDKDD
1499	9550	A	2454	2332	3329	VAGATGTHHHAWLILSLRWSLTLSPRL ECSGTSAHCNFRLLGSSNSPASAS*VAR ITGAHHHTRLIFVFLVETRFHHGGQVGL KLLTSGDPPASASQSTGITGVSHHAWPY FKLFCRDGVLLCCPG*SQLGLKQSSCQ SFPK*LDYRCEPPRPTNL*RCLARDRVLYL TTSPVRSRGGTRM/EKEVPEQRLAGSRM GQELTQQPSTETSWSLGRRRTKSPL*IFF MFLRRSL/NSVTQAGVQ*HNLGSLQPPPH GFKRLSCLSLSSWDHRCPTPCLDNF*IF GRDG/GFTMLARQVSNS*PQGPPTLASQ SSGNTGLSHCNQPVAPIFAPR
1500	9551	A	2455	566	1037	GSTLSPSLPGFCPENSCKKFNLLTAES LKLQDLSFDPKQPTQVRHL/ESPPGEG PPSRAPQKNSHEIRWCLMKCIFL*LGR MKAQTPTLFSPGLGMSPAARPRSFPGG LGEVGAGTISVPSTLTPSTSETTLQPRY GMKLADADVGGKKKK
1501	9552	A	2456	349	679	ELGHWGNRVCLSEALGLAELHPCPGNE VGPQRQG*GLAVLILAILLQGTLAQSIK GNHLVKVYDWAQEDGSVLLTCDAEAQN/ ISTWFKDGKMIGFLTEDKKKWESEVM PRDPRGMYQC*RDHRNKSKTTSQVLFT GMCSTGCI*/DLNAATISGFPLWKTVSL FVLAFGVYFIAIGQGWSASPRASDKQT LLPNDPAPTQPLKDPKMTQYSHLQGN

						QLRRN
1502	9553	A	2457	356	505	WTGGKKKAGWMPKKE/SVKLAQ*CMP VIPATQEAETGKLLPRSSRSAWET
1503	9554	A	2458	35	359	
1504	9555	B	2459	102	431	MIYRDLISHDEMFSDIYKIREIADGLCLE VEGKMVSRTEGNIDDSLIGGNASAEGPE GEGTESTVITGVDIVMNHHLQETSFTKE AYKKYIKDYMKSIKGLLEEQRPRDR*
1505	9556	A	246	466	743	LNHAVQEMIVKIELTQHMYINFHGKLEI NKGKKFGKLIHLWKLNNTVLSDQ*VKA EIQKGNKEIVLRWNKKEGMMYQNT/W/ DVAKPVLRAAW
1506	9557	A	2460	1	581	
1507	9558	A	2461	88	779	STWAVRGSRGWGVGWGGGGGSHDEMFS SDIYKIRGDRGRGLCLEGGRRWVSRT EIGNIDDSLIGGKCPPLKGPEGRRVPERH QLITGVDIVMNHHLPGNKFSQKEASKK VHQRTMKSIKGLK*RTDPEKSKTFL* QGAAEQIAHPLPNFQKLTSFFIGENMN PRWAWVLLLDYREDGWCPP*YDFLLRD GLEMEKMLTNVGNFYGSITLSSITGLLPC HPTQPPGT
1508	9559	A	2462	12	159	WSHLLRMLQL*WS/HPPKNAAAYSSCRV **ERRGLIRTYGLDMCSQSFQYAKDIGF IKLD
1509	9560	A	2463	46	371	FVILGKRRCRGALGCLKSQVEEATGGTRE HADWESLVPPLQACTVAWESRDAGSSR LSAESCNFYDLQNRCLFSYSRVCSNRHG LVRKYGLNMCRQCFRQYAKYIGFI
1510	9561	A	2464	1	591	GLLQAEGPWRSSGEAAFREITMEIWLLA WAISPVALSESTDPETWQSRCEDRHFLF KFLVIGSAGTGKSCLLHQFIENKFKQDSN HTIGVEFGSRVNVGGKTVKLQIWDTA GQERFRSVTRSYYRGAAG/ALLVYDITSR ETYNLAAWLTDARTLASPNIVILCGN KKDLDPEREVTFLASRFAQENELMFLE T
1511	9562	A	2465	3	495	GRDRVMAETYDFLKFVIGSAGTGKSC LLHQFIENKFKQDSNHTIGVEFGSRVAN LGGEPPVKLQIWDTAGQQTGFAGKTYT SLAAWLTDARTLASPNIVILCGNKKDL DPEREVTFLASRFAQENELMFLETSALT GENVEEAFLKCARTILNKIDSG
1512	9563	A	2466	1	2022	
1513	9564	A	2467	3	715	REQARPRRHIAALSGRDRVMAETYDFLF KFLVIGSAGTGKSCLLHQFIENKFKQDSN HTIGVEFGSRVNVGGKTVKLQIWDTA GQERFRSVTRSYYRGAAGALLVYDITSR ETYNLAAWLTDALTPVQPQKTGAFLC GNKK*PGPLEREVTFL/APSRAQEME LMFLETALTGENVKAFLKCARTILNK IDSGELDRERMGSQIYGIASLRKLRQP RSAQAVAPQPCGC

1514	9565	A	2468	3	953	VKMALVASVRVPARVLLRAGARLPGAA FGRTERAAGGGDGAIRPFGSQRVLVEPD AGAGVAVMKFKNPPVNSLSLEFLTELVI SLEKLENDKSFRDVILTSDRPGVFSAGL DLTEMCGRSPAHYAWVLERPVQELWL RLYQSNLVLVSAINGAICPAGGCLVALT CDYRILADNPRYCKGIQIRPKVGIICPFW G*KETLGKNLLGPGGGESALQVGLLFP PAGRCKVGIVDQVWSPEKQVQSIGLS AJAQWMAIPKPMAHKLTAKIMRKGQGP PAWSRKGADVQNFVVSFISKDSIQKSLQ MYLERLKEEK
1515	9566	C	2469	1	774	MKEVVYVWSPKKVADWLENAMPEYCE PLEHFTGQDLINLTQEDFKKPLCRVSSD NGQRLLDMIETLKMEEHLEAHKNGHAN GHLNIGVDIPTPDGFSFIKIPNGMPNGY RKEMIKIPPELERSQYPMEWGKTFLAF LYALSCFVLTVMISVHERVPPKEVQP PLPDTFFDHFNRVQWAFSICEINGMILVG LWLIQWLLLKYKSIISRRFFCIIGTLYLYR GITMYETTLTAPGMLCNCSPKLCGDCEA QLR*
1516	9567	A	247	243	935	IPVGELYLLEDGIAAFIEWNPHEALWE PQEQQETQGPCKSKHGEAPVGASWPFR GFGEARPPPPVRPTLIHAWKSS*PICLFS RHCHQALPGGTLDKWPSSPRG/GCSPRT PGVTQQAARLSPHRVAG*QSSSGACPW MSRSSAPFPFLTPSQSPRAAL*VRKTKSP GTGEHRLWTGLGAGGV SARPVVKHSAG PGGIHGGRAPGAEQRSGLWKAGCWGSV RASAPGP
1517	9568	A	2470	263	621	EVRLLSRPWPHEHEHGPWPLTIKWDFP DYRQWKIEGVTFRKTTQKKLGCKKGLR DPWGRNEAWRYMGGF AKSVSFS*CIL FKGFKWGDLLAFVAVRELEYLPGESP* IKDKKHH
1518	9569	A	2471	1	225	
1519	9570	A	2472	99	493	TASPAPPQAFRRSSSLKIRESIIRRGSEKL VSRLRGEAA/RRTSRVSDQVGKEP*HQ QNRQPTPPPPPFCSRTFHGSHLPDTHRS NPVLESLVEGGHSHWISFPCCPLCRM KRDMSLNTLNVDAPRAG
1520	9571	A	2473	70	299	AVGSVHAGVQQWVSGGVGPPGSAGPP GRKPR*RGSEDPARRNAPAIERLSRRR GRCSARGLRGRDQEEGQPGRT
1521	9572	C	2474	129	602	MFERIVXADEHVIDQDDGDNFYVIERG TYDILVTKNQTRSVGQYDNRGSFGELA LMYNTPRAATIVATSEGLWGLDRVTFR RIIVKNNAKKRMFESFIESVPLLKALKD GQRFNPHLHFAFEGPFIRPLVKITPTQFLY LWFKTACLSNNLSA*
1522	9573	A	2475	38	1523	RRVARPGNAEPAKERRDVSRGRARRDL AGAERKAGVSERGDSGRRRPNPSIPSAA AGMSHIQIPPLTELLQGYTVEVLRQPP DLVEFAVEYFTRLREARAPASVLPAAATP RQSLGHPPPEPGPDRVADAKGDSESEED EDLEVPPSRFNRRVSVCAETYNPDEEE EDTDPRVIHPKTDEQRCRLQEACKDILLF KNLDQEQLSQVLDAMFERIVKADEHVI* PKGDNDGRQPFYCHRTGGTYDILVTLDN QTRSVGQYDNRGSFWRALMYNTPRA ATIVATSEGLWGLDRVTFRRIIVKNN KKRKMFEFIESVPLLKSLEVSERMKIVD VIGEKIIRDGER*ITQGEK\ADSFYIESGE VSILIRSRTKSNKDGNGQEVEIARCHKGQ YFGEALVITNKPRASAYAVGDVKCLV MDVQAFERLLGPCMDIMKRNISHYEEQL VKMFGSSVDLGNLRAVGVPHTSLLSVT PKPSGQPQNTYRKQT

1523	9574	A	2476	1	912	
1524	9575	A	2477	3	806	EEFAAVSERIHEQVRDRQLENEYVCRVE GEFPTTEVTCKEPILVVS YKVGVC RVDP RGKPCETVFQRLSYNGQSSVVR CRPLTG RTHQIRVHLQFLGHPILNDPIYNSVAWG PSRGRGGYIPKTNEELLFVPG*AEHQAK QSLDVLDLCEGDLSPGT/LTDSTAPSEL GKDDLAEELATAVAQKMGGK*AEAAPQE LDTIALASEKAVETDV MNQETDPTLCK MPAGATGSLAPRPCDVPTCPNAIKGQAL STFHPMPAWAQDDWQKD
1525	9576	A	2478	184	793	DFLLLVLTGLYIYRKS KIHK VLE*IEFINV TSYKVNIQKDIALRTSQKH*KTN*KYKA KYLEIN*TNQDFYNYENYKTL LRKV KDN LGKWTIIPYSSTGKLDIVKMSIILRLFYKT NAITGIVPK/HSFVKINPEIPKLI/YGNMGN REGKTILKNKKVGRSLPDFQKYKAT*I KIVWY*CKKRQMNQEA EITSAKRKPWS L
1526	9577	A	2479	69	403	SALRRGAGAKAGRPLAPATALGGQTQP EKGPAAP*NGWTGLGAGPPAWRARPRPS PPEFSQFSLSYNMS*AKVGG*EHGSTAPG EGG/P*RKGGGPPPNPQRQCGSPGTSP
1527	9578	A	248	56	247	QEQN PQISILTLNRNG/LNATLKRYRLN QIK/SFCKKDQTMCC LQETYL TCKDTHR PKVKG*KNI
1528	9579	A	2480	502	834	RRLPTGILAGRVSAAVKP THRTQNSLLQ QRITPRPWRGGSHL*SQHFGKPRQADHL SPGV/PRVSPG*RGETPSLQRIQTLAQVLC CAPVVPATREVEVGGSEPEGRSRLQ
1529	9580	A	2482	1	220	VNMRDRFGQIM IENLRRRQCELAGVETC KSLESWRIESLEFLDEM*/LLEQLM/RHYCL CWATKGGNELGLKEITY
1530	9581	A	2483	98	394	
1531	9582	A	2484	1	381	
1532	9583	A	2485	1	645	
1533	9584	A	2486	10	1228	AAPAEPGRALPSSVAFSLWLAPSPAARR PRFHVPGGAQLPGTVHARWPARQRIESSI VTSCCSTSSCDADDEGVRGTCEDASLCKR FAVSIG/YWHDPIYQDLVRLSKQRKAP EINRGYFARVHGCSVQLIKVAF LRKTEC HCSNCSNLGGQGMGSPFWRLKDEDLS SQVNIFEVD FPMIVTRKLHSIKWLAFPLS SPILELHSED TLQMASDCICDGHILDSKR YAVIGADLRDLSEELK LKCNMNTQL PTP*IAECVLVYMTPEQSANLLKWAAN SFERAMFIYYQQVNMGD LFGQIM IENLR GRP V/CDLAGVETCKSLESQKERLLSNG WENKHRPVRT*LEFVPPGLPSKLK*SRIE SLEILDENWELLEQLMRHYCLCWATQ RRK*SLGLKEITY
1534	9585	A	2487	3	247	
1535	9586	A	2488	1	922	MQLKPMEINPEVSARCTATRRARGRGR GSRVADRFGFAFFFAFAFQMLNKVLSR LGVAGQWRFDVLGLEEESLGSVPAPA CALLLLFPLTAQHENFRKKQIEELKGQE VSPKVYFMKQTIGNSLGPLGNSTQGPN KDQLGFEDGSVLKQFLSETKKNVPLKD RAKCFEKNEAIQAAP*MPVGTGKAQCR VDDRVNFHFYSG*PTVDGPPSMNLDGP NAFSPWTHGPQLQEDTLLKVDASKVCRR NSPEREQRRSPASSARGFSCKGSLNALW GGICWIFPSFPFKHGKYITPPCQSKMLQY L
1536	9587	A	2489	18	255	NWISFLPWHYSHFEVYERYDSVL*IPFSL LQ*PIENVYPKJ*KKKSTSSNKIALVLSGT YKNSLEPRSGASSVLWFTPNL

1537	9588	A	249	1	372	RALAVSMLGAWPGPWALDWGPYSMTA RHGTFSL*APYPDPCPAGPPAPRQQGK APSGCGGRSICSGRLPSVWVPLMPAWQR PS*/GGGLHSAPNARKAQAYPGCLPFYLP LPLGLLSGWSAGFLC
1538	9589	A	2490	2	568	ERGRKMAVESRVTOEEIKKEPEKPIDRE KTCPLVLRVFTTNNGRHHHEMDEFSGWN VPSTELQIFPL/WMDATLKELTSLVKRV YPEARKKGTHFNFAIVFTDVKRPGYR*F SFLQS*GGLASTMSGRKGTDDSHPELQ SQKFQIGDYLDIANYPLPNRGTHPPSG RMRPILNFYLLFVEFIFPSVM
1539	9590	A	2491	3	506	FFFFLKTSTLSFITTHCLQIQREGPGAEG AAVAGGAPRGAEGPAATSTETGGSAGD/ AAPSP/RGLPSK*QEGPGPFWDPNARQ WPGGRGRREAWRGLRAGSGESHQVGP WPASRSTGGSGQVGGAGERLGEDSGL GOVKATR WGLSPPPAALAEAVANTGPSP PC
1540	9591	A	2492	3	639	APEFPGRHLLLTQLCSLASLIQTRMVHLT PEEKSAVTALWGKVNVDVVGKALGR LLVVL PWDPKRSFEVLWGNLSQLPECC *WGKPLKVKGSMKEKVLGCPLSDGLA HLGQPSKGTFAHTEVSLHCDKLHRGSL KNFRLLGNVGLCCLAHHF GKRISTPP VQAA*SRKLVGLVLAKCPWPHKYHLKL AFLAVQFLFKGFLWSLKTNY
1541	9592	C	2493	217	396	MSEETAKEVMRAYLQQLRQETGLRLCE KVFDPPQNDKPSKWWTCFVKRQFMNKS L SXPGQ*
1542	9593	A	2494	79	778	NPGAAMKPAYHSSLMDDPTKLIGNM/A HLLPIRSQFKGPAPKRDTRIPDIVDEAIFL PSGPNVFFKNYEIKNEADRTLVIYITLYIS VECLKKLQKICQFPKAQGGGKEMFYAGE STNFSHFLGEPGFFPL*PPFYAQTWPTTQ EDEVMRALFTTQLRQETGLRLCGESFS DPAQNG*TPAKWWTCFVKRQFMNKS L SGPGTVEGSPGQPTVFPEALGQHFSSKM LHNLFAFIS
1543	9594	A	2495	1	471	
1544	9595	A	2496	1	1524	
1545	9596	A	2497	2	719	RPQRAGPVRRAGVMALLDLAEGMAVF GFVFLVLWLMHFMAIYTRLHLNKKAT DKQPYSKLPGVSLKPLKGVDPNLINNL ETFFELDYPKPLFFSVAPMKRIEKTQM** P*CSTY*YEVLLCVQDHDPAIDVCKKL LGKYPNVDAARLFIGGKKVGNPKINNLM PGYEVAKYDLIWICDSGIRGTMEMPSL EQSYDPNVRDPIYRNNGDADGQHLVLH DFYQQGSGPKCSLINA
1546	9597	A	2498	200	370	
1547	9598	A	2499	295	1546	CVLLDLAEGNVVPVFGFVFLVLWLM HFMAIYTRLHLNKRATDRQPYSKLPGV SLLKPLAKGVDPNLINNL/ETFFELDYP/K KFNLHTMLFD*YEVLLCVQDHDPAIDV CKLLGKYPNVDAARLFIGGKKVGNP KINNLM PGYEVAKYDPIWICDSGIRUFP DTLDMVNQMTEKVGLVHGLPYVADR QGFAATLEQVYFGTSHPRYISANVTGF KCVTGMSCLMRKDVLDQAGDFIAFAIQ YIAKDYFMAKAIADRGWRFAMSTQVA MQNSGSYSISQFKSRMIRWTKLRINMLP ATIICEPISRMLPLPSLINWDGQAHVFR WDIMVFFYG/CHCLAWFIFYIPTPGVS QGGATLCFSKLGLMQSPWFIRESMYIIFL SALWDPTISWRTGRYRLRCGGTAEIILD V

1548	9599	B	25	922	2057	XTQTDSPWFMISEKQRNFNAESTIGSHIH GPRIVAGLHAPTLMEDEEDALQETVRAS IRKEQRNSRHDGGDGIRKAHAAPRESRS MKRSPRKEVKKKRWNRPKMSLAQKKD RVAQKKASFLRAQERAAES*
1549	9600	A	250	13	475	NGSSLRSPRLR*SRTIPQSS*VAGITGAHH HARLIFFFFFFFFETESCRVSQAGVQWRDL GSLQALLPGFTPFSCLTQSSWDYRHPPP RPANFLYF**RRGFTVLARMVLIS*FRDP PASASQSAGIIGVSHRARPRGRLLAPSYI CRNRGLEG
1550	9601	A	2500	3	331	GAILAHCNLR/LP/GFKQFSCLSLPRHS*TS Q*PLTSRLPMVRHG*VKKSEGILCSLPPC TT*VPTSSAPMPWPSRQWERSSRTMTVIS SSQLMALGPSCPQRDGSPTSSP
1551	9602	A	2501	15	310	DRVSL/LSPRLECSGAILAHCNLR/LP/GFK QFSCLSLPSWDYRRAPPHLANFLYF** RRFFRH/GCPGWSLLSSGN/PATLAF*KC* NYGHEPPHPARKIHI
1552	9603	A	2502	3	467	PAPQSLLSARHVSALPTPAS/R/RCSGLPP MTPKTMPPRA/VGSPLCVPARRRSSEPRK NSAM/RALLVDIKLEPLAVTPDAA/SQPLI DLPLIDFCDTPEAHVAVGSESRPLIDLMT NTPDMNKNVAKPSPVVGQLIDLSSPLIQL SPEADKENVDSPLLK
1553	9604	A	2503	2	273	FASIPANSSRPLSNISKSGRMGHAMLRPA LPAGPVGASSWQAKRSESSQLNKTRSIR RRHSCLSNKTVMPTPTNQFKIPKFSIGD SPKA
1554	9605	A	2504	1	472	VGRVTVHSTPVRSSGPGPQSLLSARRV SALPTPASRRCSGLPPMTPKTMPPRAVGS PLCVPARRRSSEPRKNSAMRTEPTRESN RKTDSTLVDVSPDRGSPSRVPQALNFS EESDSTFSKSTPLIDFCDTPEAHVAVGSE SKPLIDLMTNTPDMN
1555	9606	A	2505	759	1664	TAGCGLGCASGPQAGHPATAGPQTLLPS AGGRAWSSCPPRALHRWPAGWEGCG YRRWS/RAASYSPWKNKVLLIKPFSIRYK AQ/SNSYDKPTYQSPSRRLSAA*IPTHP* SLLSSRGCERRCAPTMRQPGAADTEPMC YHSWPHHSLFLPSSCLWGAGVEDKEL VPLWRVFLPGRRSWFPSSQKSRCLSHSC LGGCQVSRRGKFEQQNLSSVPDSPGKNK HHGKISGPTCLSGGPGESVPIVHRLSESS HWQMSLLQTRAAAPALSAAGFLKSPPLS SQPGPALCPASRSFQCQSAOQG
1556	9607	A	2506	1	377	ASRRCSGLPPMTPKRCPRGSPCLCVPAR RRSSEPRKNSAMRTEPTRESNRKTD SRL VDVSPDRGSPSRVPQALNFSPEESDSTF SKSTATEVAREEAKPGGDAAPSEVGGLL EPRSSGPAWEMM

1557	9608	A	2507	3	2112	ILLLADEKFDLSDLSSSSANEDDEVFFG PFGHKERCIAASLELNNPVPEQPPLPTSES PFAWSPLAGEKFVEVYKEAHLALHIES SSRNQAAQAAKPEDPRSQGVVERFIQESK LKINLFEKEKEMKKSPTSLKRETYLSDS PLLGPV/VGESCTAHAASQAATQKPKGT KLLLPRAASVRGRSIPGAAEKRTARMPK GRRKRK*QVLF*G*GCCGG*GEG*GCGE AGSSRIA\PKKEIPASPSRTKIPAEKESHR DVLDPKPAPGAVNVPAAAGSHLGQGKRA IPVPNKVNNEIFADSVFSHFAPLGLKCTL LKAPGSTNLARKSSSGPVWVGASSACT SPAVGKGLCCTPVCPARPARPLHSCCK MTPSRPWLWQCREGLECP*GSGGTWV VRHSCDRRAGRSGSQSPRPHFGSSEVLG* TWRPGERTGDSPDSTPKLSRAQRPQSC TSVGSSRH*CCVC\RVTVHSTPVRSSGP APQSLLSAWRVSALPTPASRRCSGLPPM TPKTMPRAVGSPLCVPARRRSSEPRKNS AMRTEPTRESNRKTD SRLVDVSPDRGSP PSRVPQALNFSPEDSTFSKSTATEVAR EEAKPGGDAAPSEALLVDIKLEPLAVTP DAASQPLIDLPLIDFCDTPEAHVAVGSES RPLIDLMTNTPDMNKNVAKPSFVVGQLI DLSSPLIQLSPEADKENVDSPLLKF
1558	9609	A	2508	68	2331	LLTALSMEEGGGRDEPSASRAGDVNMD DPKKEDILILADENISTFDLSSSSANED DEVFF*PFGHKERCIAASLELNNPVPEQP PLPTSESPFAWSPLAGEKFVEVYKEAHL LALHISSRNQAAQAAKPEDPRSQGV RFIQESKF\KINLFEKEKEMKKSPTSLKRI ETYYLSDSPLLGPVGEPRLLASSPALPS SGAQARLTRAPGPPHSAHALPRESCTAH AASQAATQKPKGT KLLLPRAASVRGRGI PGAAEKPKKEIPASPSRTKIPAEKESHRD VLPDKPAPGAVNVPAAAGSHLGQGKRAIP VP\NKLGLKCTLKAPGSYSNLQRKSSS GA\WVGASSACTPQPVAKAKSEFASIP AN*LPGLCPNISKSGRMGPAMLRPALP AGPVGASSWQAKRVDVSELAAEQLTAP PSASPTQPQTPEGGGQWLNSSCAWSES SQLNKTRSI RRDSCLNSKTKVMPPTN QFKIPKFSIGDSPDSTPKLSRAQRPQSC TSVGRVT VHSTPVRSSGPAPQSLLSARR VSALPTPASRRCSGLPPMTPKTMPRAVG SPLCVPARRRSSEPRKNSAMRTEPTRES SRKTD SRLVDVSPDRGSPPSRVPQALNF SPEEDSTFSKSTATEVAREEAKPGGDA APSEALLVDIKLEPLAVTSDAASQPLIDL PLIDFCDTPEAHVAVGSES RPLIDLMTNT PDMNKNVAKPSFVVGQLIDLSSPLIQLS PEADKENVDSPLLKF
1559	9610	A	2509	1	353	DVQLEGAKIGSTEITFTPEKIKGGIHTAY TKTAGSVCLLMQVSMPSVLFASPSQLH LKGGTFKVAQDMATAAVRCIKKEIRDL YVNIQPVQEPKDQAFNGNGIII AETSTG CLF
1560	9611	A	251	986	1401	LEQGCNLF LHKHS*LGEVFFFVCFRRSFT LVAQAGVKWDLGSL/HKLPSLSLPSS WDYRHPLPRLA/NFFVFLVKMGFTVLA RMVSI*PRDPPTSASQSAGIIGVSPRAGP VAGILMFCRWNISNPKPGAVIEKKKKK

1561	9612	A	2510	29	1262	TKVSELLCGSQRLFFLPLWRRLCRCGLG PRVSPMAGPRVEVDGSIMEGGGQILRVS TALSCLLGLPLRVQKIRAGRSTPGLSIMT *RPQHLSGLEMIRDLCDGQLEGAIEIGSTE ITFTPEKIKGGIHTADTKTAGSVCLLMQV SMPCVLFASPSELHLKGGTNAEMAPQI DYTVMVFKPIVEKFGFIFNCIDIKTRGYYP KGGGEVIVRMSPVKQLNPINLTERGCVT KIYGRAFVAGVLPFKVAKDMAAAAVR CIRKEIRDLYVNIQPVQEPKDQAFNGN GIIIAETSTAGCLFAGSSLGKPGFNSDKVV IEAAEWLLANLRHGGTVDEYPARPSLI VFHGH*PNGVSRIKTGPVTLHTOT/API HFAEQIAKG*ILL*RNPEDEEDA\AKDTYI IECQGIGMTNPNL
1562	9613	A	2512	900	1189	SQHFGRRRADHLSSGVQDQPGQRGKTP SLLKIQKLAGRGGSL*SQLPRRLRQREN RLNPGGGGCSELRSDCTPAWATEGNS VSKKNK*KKKKK
1563	9614	A	2513	1710	2221	SPLLDVYFKTRLLSRGRREACTLRLNTI GTLLSHCPLGIQGPHPGSPGKTCGPFKPR GPGHSCPPPDKKQVPTVLPLPAPLRWA QAGLPGYAGISGSPGRPLGAQAG*GSGV IGESNYFVHCMHPRGPGSPHL/PGG*GLQ PKPPRPRLPSSSGSTTGLGDRKPCSYSQ
1564	9615	A	2514	205	295	GCNGNKDSCGPIAPSSGDILLTVKRSRP R*NFSPICAIPCSSSKRAMCSRVCSPWGL *CGPIAPSSGDILLTVKRSRP
1565	9616	A	2515	1	927	
1566	9617	A	2516	932	1688	KGFKNPTFPCEIPAGQTHKPHHHNKHSS PPVQKLKLQKMKKNEVYETFSYPESYS PTLPVSRRENNSPASNLPRPSFCMEEYQR AELNEEDPI/LSARTSPVHPSDFSEHNCQ PYYASDGYATYGSSGLCLGNPRADSIH NTYSTDHASAAPPSVTRSPVENDGYIEE GSITKHPSTWSVEAVVFLKQTDPLALC PLVDLFRSHEIDGKALLTHGVTVLPEAT WGVKLGTGL*SLCYLH*PDLKQKCL
1567	9618	A	2517	3	179	
1568	9619	C	2518	140	490	MAWFHDMNPQSIALIPPATTEISADSQLP CIKDGSEGVKDVELVLPXSMFEDASVS EGRGTQIEENPLEENILAGEXASQTGDSG NEXANRGDGSQVSSQTPQTSSDWLEX XLX*
1569	9620	A	2519	194	405	KKILWKKIFWRGKQHLKLVTVVTTAAN RGDGSQVSSQTPQTSSDWLEQVHLV*TA HIWGSKWYRYRVC
1570	9621	A	252	303	551	QEGIKSCKSDENSGLAPGQHGETPSLLK VSKLAGYGGACP*SQLRRLRQENCLN RDLGGGGCSEPRSCHCTPAWTTEQDSV

1571	9622	A	2520	1	2046	MRQNSGGNVHLPA AHLVLCGLVPNRPW TGKNKNKRHHLCIPQPPTLAKIAKAAK GSAGNFRYPLILGSFPANWVFMNFFQSK ATLDFNLICSLNVKDVAEVFQKWLKIEG KKCHCLSEKTKQNMGNNTTKFRKALIN GDENLACQIYENNPQLKESLDPNTSYGE PYQHNTPLHYAARHGMNKILGTFLGRD GNPNKRVHNETSMLLCMGPQIMISEG ALHPRLARPTEDDFRRADCLQMILKWK GAKLDQGEYERAAIDAVDNKKNTPLHY AAASGMKACVELLVKHGGDLFAENENK DTPCDCAEKQHKKDLALNLESQMVF SR DPEAEIEAEYAALDKREPYEGLRPQDL RRLKDM LIVETADMLQAPLFTA EALLRA HDWDREKLLEAWMSNPENCCQ RSGVQ MPTPPSGYNWDTLPSRTPRTTRSSVT SPDEISLSPGDLDTSLCDICMCSISVFEDP VDMPCGHDFCKGCWESFLNLKIQEGEA HNIFCPAYDCFQLVPVDIESVVSKE MDK RYLQFDIKAFVENNPAIKWCPTPGCDRA VRLTKQGSNTSGSDTLSFLLRAPAVDC GKGHLFCWECLGEAHEPCDCQ TWKNW LQKITEMKPEELVGVSEAYEDDRQ/CVC *VMN*TAKPCANCKSPIQKNEGCNHMQ CAKCKYDFCWICLEEWEKT
1572	9623	A	2522	2	119	ESTVSCCEKPTGAMP*MHTACGRPCPSI WRLTKLSMRLR
1573	9624	A	2523	159	627	LGRMQDPQGGQMRWAYS LTFKDVCO LGLSHYFAGAASGGCAQARCGPGR* GPPAPVPSPLALPPMGTRKLHPGMWT ALH/VRIP/VPKKEGCVQLIGEISCVLLQK ASWSEASTLCPAKGAIPNGAA FHQRCGR PEAHLGHRLSLAPPREP VET
1574	9625	A	2524	3	307	
1575	9626	A	2525	1053	2813	RTWEKAPEQADLTGGALDRSELSHSL MLPLERGW RKQKEGAAAPQPKVRLRQE VVSTAGPRRGQRIAPVRKLFAREKRPY GLGMVGR LTNRTYRKIDSFVKRQIEDM DDHRPFFTYWLT FVHSLVTLAVCIYGIA PVGFSQHETVDSVLRNRGVYENVKYVQ QENFWIGPSSEDLIHLGA*ISPCMRQDPQ GLSFIRSAREKHSACCVRNDRSGCVQ TSEEECSSTLAVVWKWPIHPSAPELAGH KRQFGSVCHQDPRVCDEPSED PHEWPE DITKWPICTKNSAGNHTNHPHMDCVITG RPCIGTKGRYVCVPASAAGLWAQSI AL GCEITSREYCDFMRGYFH EATLCSQVH CMDDVCGLLPFLNPEVPDQFYRLWLSLF LHAGQVTLILHCLVSICFQMTVLRDLEK LAGWHRIAIYLLSGVTGNLA SAIFLPYR AEVGPAGISQFGLACLFRGSSSRAGQIL GAALACLLQACWLWVLFHLWGLLP WDLTTFAHIFGGSSVALFLSFAFLPYISFG KVRVPETLDPDHLSGGLPRASWLA WW SSSTSILSAVSRVSSSPASPFTDKLL
1576	9627	A	2526	1	936	
1577	9628	A	2527	1	1023	
1578	9629	A	2528	157	512	LG*LQPPPGFKRFSCLSLSSSWDYRMRH HAWLIFVFLVEMGFTLISASRVAGITGM RHHAWLIFV/CSR DGVSTCLGQAGSQT PDLKVICPLGPPKSAGITGVSHCSWPVIY VLSTLLHAVRNVLFKRTFPLKSSSFLSYD KEIFPILIGLKFYLVTLTSFVKGHILLK
1579	9630	C	2529	11	133	MFCSLQPTDLRKEXMNLQTLRLRSSNKH QRFPGLPRLCD*

1580	9631	A	253	3	401	STFGFQGTGWETR WGPT*PGVSAWSLVP SPVLETPDLER GKRAHLGVATAGGPAGP YRLSPHTLSSRKEGKGEAASKGTEAELM TIGIENSTCQCLSPSFSHYFWSPRGAGP KAMWLVGDRKGATKNDKRGY
1581	9632	A	2530	367	676	KVVTLLHILQRRKWGA/PGSDPKSPCCSD SKGQASFTAP*CSYLYTADGRLGLAWG* GLNRSAMTSNPDQTHLVAQTS GKPERK HKVSGFLVKVIPATAYDNG
1582	9633	C	2531	156	683	MKLQRWRHPAHFSGTGK MIGEGTQVS VGTGVTVDTGVGCLSTSSHYANRNADT FRCLCRKRCQRLKSRRGVKKSCISVP HRQLSQALQAMRDSSEPWALSIFRE DEALASKHYRRNAPRAALRQFLSDFHR DCLNVFKTKYHTLMYMGRTIMRCEPCA CGGEGKKNVLF*
1583	9634	A	2532	427	458	KNSQYTPLTLIQMMGF*FFVF/ERQSHSV VEAGVQSCSHGSLQPLPPGSSNPPTSASR VAGTTGAHHDDLIFLFL*RRGFALLHRL VSNWSRSDSAWPSAFPKWLGLWDVEA TTPRPGLFSLVAG
1584	9635	A	2533	57	463	ARTPLQGAGGLVLSRLLSLPLPGLSPLPT VSCARWPLCPRPWSSLP GFWD SWHCNH RTGHRTGPGGLDTQSA*VNKLIWKGKN HL*PQATAQLWPQLGGWQGWTRPS/RW WPLSSPHC*PGYRSLKDSFANTFLF
1585	9636	A	2534	3	469	RKTTTATMTSLCRKVNGGHAG*ETLRL LVVYPWTQRFFDSFNLSSASAIMGNPK VKAHGKKVLTSLGDAIKHLDDLKGTFA QLSELHCDKLHVDPENFKLLGNVLETVL AIHFGKEITPEVQASW/QEDGDWSGQSP VLQIPLSSLAMMQSCQG
1586	9637	A	2535	41	676	APSPRRPWGHFTEEDQGLLSTLWCKV NVEKCWKEKTPGKGS LVVYPWTQRFF DSFNLSSAFAHHGQTPKVKAHGKVK VLTFLGRCCQSTLDDLKGTFAQLSELHC DKLHVDPENFKLLGNVLTVLAIHFGK EFTP/ERLQASWQKMGD*SGQCPVLQI PLSSLAPMMQSF SRIRLLFLQAITNNKSIS AKRSHMIFSSFFYIFLNI
1587	9638	A	2536	107	331	
1588	9639	A	2537	386	1074	NNPEWRTLIVDKENGEPGTRVVAKD LKLGSGPSIKALDGRSQVS TPRFGKTF D/APHPALPKAT*KGFGE LSTGATEKSVK DPGDPLKQKNGPAFSGPKKMDLKKDCL KQKS SVSWPSGLMPNPRNKT KFFPLQIL LDF*GVFD/LCPEEHPDLRHLPLSGVPL MIPLTREREL*KSWFQLGPPFHLWKDGP LPPWGIPICLQFSFQGISVRTWGVLDLPPV CCDIDI
1589	9640	A	2538	1	359	
1590	9641	A	2539	1	483	FQLEVTPQNITLNPFGGPFVFSWRDQAV LRQDGVVVTINKKRNLVSVDDGGTFE VVLHRVWKGS SVHQDFLGFYVLD SHRM SARTHGLLGQFFHPIGFEVSDIHPGSDPT KPDATMVGLQKDYSKDPWHGAEVSCW FIHNNAGLIDGAYTDYIVPDIF
1591	9642	A	254	1833	2126	EKRKKRGFFKTKPLLKCPGPWGSRFW GPPKGKSQV*G/HI*MGPNLGERWKKGP KRPKKPKTKGPPFVHPPKRNPHLG/ WPGGPTLKKKGKNNLGFC
1592	9643	A	2540	3	310	EVRLANLSSQALRMWLDYGFVTLTSM RGMADQDGLKPTIDKPSDSPLEMLGP RRTFVLSALQSPSTHSSNTQRLPDRVTG VDT*VVT*PYVLCWNLC
1593	9644	A	2541	1	1482	

1594	9645	A	2542	37	2885	SMDGAMGPRGLLLCMYLVSLILQAMP ALGSATGRSKSSEKRQAVDTAVDGVFIR SLKVNCKVTSRFAHYVVTQVNTANE AREVAFDLEIPKTAIFSDFAVTADGNAFI GDIKDKVTAWKQYRKAAS*EKA\GLVR ASGRTEQFTIHLTVNPQSKVTFQLTYE EVLKRNHMQYEIVIKVKPKQLVHHFEID VDIFEPQGISKLDAQASFLPKELAAQTIK KSFSGKKTNSGSHSRRFQGHVLFRTVS QQQ
1595	9646	A	2543	159	1222	NNSGVMPEMPEDMEQEEVNIP**GGFW VTGCHWGFLGRAVHKEFQQNNL/WHA VGCGFRRARPKF*TG*ICWDSNAVHHIN HDFQPHVIVHCAAERRPDVVENQPRCL PLQLNVDAASGEF*AKGKAAACLSISPF YI*AQVFVF*WEPNPPYREEDIPAPLNL YGQTKLDGRKGCPWRNHLGA AVLRIPI LYGEVEKLEKKCELLMFE*KCQFSQQS PAKQWIHWQARGSPPHMSKDVAPLCAR QLAEKRMLDP\SIKGTFWHWSGNEQMT KYEKGMCQLPDAFNLPSHL/RDPITDSP VLGAQRPRNAQLDCSKLETLGIGQRTPF RIGIKESLWPFLIDKRWRQTIVFH
1596	9647	A	2544	211	463	
1597	9648	A	2545	188	366	SCQSACQKNGKIILRLQLLGP*DRLEDTL LNTHGLLQSQILCQFCFLCTCQQKVLRI K
1598	9649	A	2546	1257	1441	
1599	9650	B	2547	74	733	MAWKSGGASHSELIHNLKNGIITDKV FEVMLATDRSHYAKCNPYMDSPQSIGR VQLVVGDRMGYAEAPYDAIHVGAA APVVPQALIDQLKPGGRLILPVGAGGN PNVGASIPGSRMASIQNEALWMGGDIRA L*
1600	9651	A	2548	45	972	TVQPHVSGSGDGSNSGSGDASGAV TVWEVVSLLGKLLGTVVALKVVLYLLR VCLAMAWKSGGASTSELIHNLKNGIIT TDKIVFEVMLATDRSHY/SQKCNPYMDS PQIK*GFQATISCSTHCNAYALRNFLFWI QL\HEGSLKLFVVGSGKWESLLACFAR MVGCTGKIVIG\DAH*RS**DDSVKLMF REGTIPILLSFRGGVQLVCGGMGRMGY A\EEAPYDAIHVGAAAPVVPQALIDQLK PGGRLILPVGAGGNQMLEQYDKLQDG SIKMKPLMGVITYVPLTDKEKQWSGGMI VKATSA
1601	9652	A	2549	2	478	
1602	9653	A	255	70	380	YSNNPKDRKGETGINEKTNNKMVDLSS YTSVITLNF*ML*/D/KIN*KFVKSP*KKPT LCCLLETYFKYGIGGLKVKRWRKI*HAH TIGKKTIVAILTKHTSELS
1603	9654	A	2550	392	1245	CTFTKVFLLRWYRNMLLKNSVTPLPS CHPSAQCLGTLMRALSQVFRDAW/WWV ASVDVVENEEASASIVKMTDSFTEQAD QVTAEVGKLLGEEKVDA\ILCVAGGWA GGNAKSKSLFKN\CDLMWEAEHYWTS HLP\SHL/ALTKHLKEGGL\TLAGAKAA LDGTPGMIGYGMAKGAVHQLCQSLAGK NSGMPPGAAAI\ALPVTLDTPMNRKS\ MPEADFSSWTPL*FLVETFDWITGKNR PSS\GSLIQVVTTEGRTELTPAIFLGLISV PMRWPAQKSH
1604	9655	C	2551	60	266	MSWLSCLSNITVWNISPVLSSFFGGNSLI SHLXKIPPEEPFLTPLLSSPSGFXPHVPR VLRQSATV*
1605	9656	A	2552	1	513	

1606	9657	A	2553	345	2343	LLGHEEQTRKGRKAKAAGMVLSQLL TFRDIAIEFSQEEWKCLDPAQRILYRDV MLENYRNLVSLGIFSKCEIKELPPKESM KEKYSRQ*CWKDMKSHRHTKIFCFRETQ KNVHDSQCLWKHD*RHYKRVVITYKG KSH/CVEETMPG*KG*CHKSQPC*KSSLG LNPAVT/CLPRTCQPIISKPEGKIYKYDHM EKSVNSSSLVSPQRISSVTKTHISHTYEC NFVDSLFTQKEKANIGTEHYKCSERGKA FHQGLHFTIHQIIHTKETQFKCDICGKIFN KKSNLASHQRIHTGEKPYKCNECGKVFFH NMSHLAQHRIHTGEKPYKCNECGKVFF NQISHLAQHRIHTGEKPYKCNECGKVFF HQISHLAQHRIHTGEKPYECNKCGKVFF SRNSYLVOHLIHTGEKPYRCNVCGKVFF HHISHLAQHRIHTGEKPYKCNECGKVFF SHKSSLVNHWRHTGEKPYKCNECGKVFF SHKSSLVNHWRHTGEKPYKCNECGKVFF SRNSYLAQHIIHAGEKPYKCDECDKAF SRNSHLVQHRIHTGEKPYKCDECGKV FSQNSYLAYHWRIHTGEKAYRCNECGK VFLHSFLAHDPIHTGEKPFKCNECGK AFSMRSSLTNHQLRHTGEKHFKCNECG KLFRDNSYLVHRQRFHAGKKS
1607	9658	A	2554	3	517	STRTONVLGEKGRRIRELTAVVQKRFGF PAESLRYKLLGGLAVRRACYGVLRFIM ESGAK/GCEVVVSGKLRGQRAKSMKFV DGLMIHSGDPVNYVDTAVRHVLLRQG VLGIKVKIMLPWDPTGKIGPKKPLPDHV SIVEPKDEILPTPISEQKGGNAEPPAMPQ PVPTA
1608	9659	A	2555	3	495	
1609	9660	A	2556	24	861	INPPPPRLSFORSAAARWPVQISKRRKF VANGILSKLNLNEFLATRELAEDGYSG VEVRVTPTRNRKSFIFSHQKHRMVLGEK GRRIRNELPAVVQKSF/GFPRGAARELY A*KRWPT*/RGLCAICPGQSLCVYKPS*G GLAVRRAL/CYGVLRGSFIGEVGPKGCE VCGCLGKLRGQRA*NP*SFVDGLMNH GDPVNYVDT*VRHVLLRQGVVLGIKV KIMLAWDPTGKIGPKKPLPDHVSIVEP/ RRDEILPTPISEQKGGKPEPPAMPQVP TA
1610	9661	A	2557	116	718	IFLQAGCLKLVRISKAGDISHVDTHCQTV HPKAVSISTMTENTPFLTSLSPALSPFN PFQIEK*YLILTLIFLIAEYESLCL*SVF LIYKIFL*PLSNFCCL*VLLYILNLLFY MYFPTPLFMKSNFIKVL*KVKGFTF*KCS QIYLFFHGYWVLCGLWECLSYTFITIFFQ YFLLVIFNFHV*FILIFFIHDMDK
1611	9662	A	2558	88	811	GSGGNHVSCCDTMEGGGSGDKTTGVL AGFFGAGGAGYSHADLAGVPLTRMNP CPYLNVDPRYLVOGYKMKFIFTLPELIK TRGQDLKLAFITIGGCCMTGAAFGAMN GLARLGLKETQNMASWSPRNVQILNNG *LGKGA\WANTLGLWALLYSAFGV EKTGAEDDLNTVAAGTPAGLLYTCTG VLRGIAVGGTLGLTSLSLCTIYNTWG AHGKGSASNSLWKVFAQPP
1612	9663	A	2559	1	210	VIIRLPIGKKLFRCKPG*TWAPPGL*SGR PRSSSSPF*N*MHFLFERESSFHRCKWK AGITCVKSWYP
1613	9664	A	256	225	353	RWGFTQLLRRLRQENHLNRGVGGCSEP RLC\TPAWATE*DSVL

1614	9665	A	2560	128	687	THVLWAFPGARVHLQTGSWRAGVAAA ALALGGQASLSYARGKES*GHSPPPTHT HKAASGGREKAVSPSVAVVSHGPSPLLS EYTSSQVKGHSRGPDPVVTHL/WAPFP DQLPPSPCPLSRKEPEPSLHPPQGVTP GQAQIGQLRTSGLWGHKRGWARAEG APVSLLLRGPFDGPATVSEAQR
1615	9666	A	2561	246	410	
1616	9667	A	2562	1	414	AWHEETHKVDLGLPEKKKNKKVVKEPE TRYSVLNNDYFADVSPLRATSPSKSVA HGQAPEMPLVKKKKKKKKVSAALGKE VKRSQSKLRLRNTSP*VMTLRPPQKRK*S PKRR*SSQSSRSQL*KGRKRRRGKRG
1617	9668	A	2563	198	531	RNNPLSLLALCLVHSSHLCWALPDEG GGQGKERALNSRKIATFLLSSQGTQFGQ WDTAGFENEDQKLKFLRLMGGFKNLSP SFSRPASTIARPHMALGKKAADSLQONL
1618	9669	A	2564	190	510	
1619	9670	A	2565	1	1977	MEVDFKIRKVGQWTITLQEHVSVLLFIE ETHPENKPTSTAVEESHISRDTVMVNFQ CQLDWSKGYLEAYLTKINSICSHRFLD GSVTCHDETGSRDARDTVGTGVRVND ESVEQLGLRRTMWLGICRGAAMAAVST VTAFAGRPRPGSRNPRGWAGDSKWS GSRRLSRLSGGGEISPTGMITKTHFVYL GLPEKKKKKRVVKEPETRYSVLNNDY FADVSPLRATSPS*DVAGQAPEMPLVK KKKKKKKGVSTLCEEHVEPETTLPARRT EKSPSLRKQVFGHLEFLARGKRKNKKSPL AMSHASGVKTSQDPRQGEETR VGKK\ SKKKHKKKKGGPGPHSLAPVQDPWFCEA REARDVGDTCVSGKKDEEQAALGQKRK RKSPREHNGKVKKKKKIHQEGDALPGH SKPSRSMESSPRKSGSKKKPVKVEAPEYIP ISDDPKASAKKMKSKKKVEQPVIEEPA LKRKKKKKRKESGVAGDPWKEVVPSE MDFAVGELRETDTDLEVVEKKGNMDE AHIDQVRRKALQEEIDRESGKTEASETR KWTGTQFGQWDTAGFENEDQKLKFLRL MGGFKNLSPSFSRPASTIARPNMALGKK AADSLQONLQRDYDRAMSWKYSRGAG LGFSTAPNKIFYIDRNASKSVKLED
1620	9671	A	2566	1781	2148	VRRFAAAVATLPPGAAPSG/PAPGT/PGP QTRIPGFPWPPLCPLMSGSLGP*TRLLLV PPAPQGPAGSPGPIQAGRGLAAPPPPLS PSRGPCAGSSWELRLEGLSDWGTCVPVC PCHYIHPKPN
1621	9672	A	2567	1	345	
1622	9673	A	2568	1	582	SGRALHASWAAGGVGAYSGRRLRSDALE GESFANLSFSSASDAEFDAVVGYLEDIIM DDEFQLLQRNFMKYYLEFEDTEENKLI YTPVFNEYISLVEKYIEEQLLQRIPEFNM AAFTTTLQH/HIRDEVAWVTIFGNAGST FHKIFLGF*RKCFLDYRAEKESRGLDLS SGLVVVTSLKSSSLPASQNNLRH
1623	9674	A	2569	2	705	GSVGAATVRQPNALRCRLRSRAGRSPV LVFGVGIKQPPCPSKKAKTTKKRPQR ATSNVVFAMFDQSQIQGVQRGPFNMIDQ NRDGFHSDK/EKVLHDMLASLGKNPH* WHYLDAMMMNEGPKGPFKFHQCSLTMF WLRKLNQVTRSPEDCHPETAFCFAFD*KK ATGTHFRKDYLRRC*PTHGGIRFPD/ER EVDELVRGGTLLDQKKGNFQITFEHTA SWKHGSQRPKMT
1624	9675	A	257	238	512	HMYVPNLRTSKYMKRTLIELKGEIDSNTI LVGDFNTTSTMGRTFR*DISKETEDLHN TVDPMDLTD/SAELSTQQQNTLSSQAH GIFSRT

1625	9676	A	2570	1006	1022	TRNSFLFFIYIYFLMRMGSCSVAQGWKCS GTILGHCSLCLRLPGSSNSPTSASHVAG D/SHGMCRRHARLIFAVLEMGFHPCWP GLGLELLTLRVIHPTLGLPKCWGL*AGG SAKIGRRRAQIG
1626	9677	A	2571	668	863	TFCFFSDLKYSLASCEHLVCLFVCFAP LV*T*NYFCL*TVNLAFSVRVTELCPFIFI VLIIT
1627	9678	A	2573	258	579	FKQICLFLLLFFEMESCSVTRLECSGTIS AHCNLHLPVGGSSDPASAPVTGITGTCH HAQLIFLYFYMTGFRHVAQVGVELLGA *AIHLPWLPKVLGLQAPAPDL
1628	9679	A	2574	157	371	
1629	9680	A	2575	1	1431	MHKAGLLGLCARAWNSVRMASSGMTR RDPLANKVALVTASTDGIGFAIARRLAQ DGAHVVVSSRKQQNVDAQAVATLQGEGL SVTGTVCHVGKAEDRERLVATAVKLHG GIDILVSNAAVNPFFGSIMDVTEEVWDK TLDINVKAPALMTKAVVPEMEKRGGGS VVIVSSIAAFSPSPGFSPYNVSKTALLGLN NTLAIELAPRNIRVNC/LAPGLIKTSFSRM VLGEPEDCAGIVSFLCEDASYITGETTVN LSVMFTGGGVCRAASWKEGGTGTPRTP RESRQREPGETSSTDQTENKVNGLPA NPQRPAEGRPVRRTNKQKGIASAKD SINIRTKGDIHTKTPSIGHQHQRPKVDKT TKMERNQSKKAETSRNQNVSSLPKEYKS SPAREQNWMEKFDLTDVFSRRSVITN YTQLKEHVLTHCKEAKNLDKMLNEWLT RMKNLEKSLNDLMELITTVQELHEGYTS FNS
1630	9681	A	2576	201	398	
1631	9682	A	2577	195	434	
1632	9683	A	2578	150	284	
1633	9684	A	2579	1	625	MHKARLRGHCARAGKSVRLASSGMTRR DPLTNKVALVTASTDWIGFAVAQRLAQ DGAHVVVSSRKQQNVDAQAVATLQGEGL LSMTGTVCHVGKMKDWERLVATGFSPY NVSKTALLGLAQTLPIELAPRNIRVNCL APGLIKTSFSRMLWMDKEKEESMKETL RIKKV*ASPEDCAGIVSFLCEDASLHSL GKTVVVDGAGTPSRL
1634	9685	A	258	167	408	DRRITRSGVRDQPGQHGETPSLLKIEKL AGHG/GQAPVCGGRSYLRRLRQENRLNP GGRGCSEPRLRHCTPA*VTVRDSVS
1635	9686	A	2580	84	1413	ARKSVRMASRMTRRDPLTNKVALETA STDGIGFAIARRLAQDRAHVVISRKQQ NVDQAVATLQGEGLSVTGTVCHVGKA EDRGAAWWPPAVKLHGGIDILVSNAAV NPFFGSIMDVTEEVWDKTLDNVKGPK P*MTKAVVPEMEKRGGGSVVIVSSIAAF SPSPGFSPYNVSKTALLGLTKLAIKLAP RNIRVNCLAPGLIKTSFSRMLWMDKEK EESMKETLRIRRLGEPEDCAGIVSFLCSE DASYITGETTVNLSVMFTGGGVCRAAS WKEGGTGTPRTPRESRQREPGENQARS SPRMALRPEFPESASTSWMGPEPVGNR ERPCKPARKVGASPRALRRLGSATRMLS RAALRAGVGARAPRPGGGRGAHATATV WSGLASAAALTARALLKRSLACAAAPQ RCGWRRLLCSSLGIRGSGWPCPPWSSI
1636	9687	A	2581	1	560	MVYRQNLQPSSCAPEMGREDGLRALHP AQPPPPRAQQSPPPLSA/PEEPPPPRAQQ SPPPPLLTPHRRHPQSFPAPSALSQRQ PGLYSAVTFSGSLSGPRTSTCTSPASSPS AHGLGHIHTDAGVCSLEAQEEAKAPGG RGPCSAHGALGPTCTSGVAGDSGPVVG SQERALDPRRQLQH

1637	9688	A	2582	775	1408	TIPVAYVWADPPLPPKGHSCPHPPGSD/D GTRTTGTA/PPCLGFQGDPPVHPAPAPP DW**FPNMGQGPFPFPTWRAQLQLLK SSVNMGRHRWRNVPSGPHLPEQISLSEL GHSHKPLFLRQNPNTVPWDVMLPFPLL NLLYGKMWNWVSLDLWGCHRNEEWRP TNIILLAPWRHGRQLQKGAGARGRQLPQ LLLALLLILVGYEMSF
1638	9689	A	2583	3	560	GVPPKSASKFLCTRNGKGRWAQSPPPST A/PPPPRAQQSPPPPLSAQK/KPPPPRAQQS PPPPLLTPHRRHPQSFPAPSAPSALSRQP GLYSAVTFSGSLSGPRTSTCTPSPASSPSA HGLGHIHTDAGVCSLEAQEEAKAPGGR GPSCSAHGALGPTCTSGVAGDSGPVVG QERALDPRRQGLQH
1639	9690	A	2584	189	608	AFLT FNKLHRTDTCRGNKPHPPPPPGSK VRKRTWGFAPPGPSPWASLPHGLPPTA GRQGRGR/EGGGPRGGPGKSAQPSSGT RAWRKPMGGCLTEDGPYGGPKGLWP*T TNG*K/PPGARPWPPLPLGCPLEPRHPVL GP
1640	9691	A	2585	2	847	LKMAAEEPHQQKQEPLGSDSEGVNCLA YDEAIMAQDRIQQEIAVQNPLVSRLE LSVLYKEYAEDDNIYQQKIKDLHKKYSY IRKTRADGNCFYSGFRILPLGRHCWDDS KELQRFKAVS/WPRARVDLGCSQ/WGFT *ISQF*GIFHNKFHGT*LSRWRKQTSVAD LLASFNDQSTSDYLVVYLRLLTSGYLQ RESKFFEHFIEGGRTVKEFCQQEVEPMW KESDHIHIMALAQGLNGAIQGEDMDRG EGGTTNPHIFPEGSEPKGYLLYRPGHYDI LYK
1641	9692	A	2586	468	1191	DVSRVGLPPSRAMGWTALLRRGSAV SALASGLVEEPMLGPPFHTPRFKAVSA KSKEDLVSQGFTEFTIEDFHNTFMDLIEQ VEKQTSVADLLASFNDQSTSDYLVGYLR LLTSGLL*GPRASSSTSSKGGORDCPKEF CQ/QELEPM*KESDHHSHHCAGPGPSAC PSRVGVHGTAAEGGNHQSALSLRASEP KVYLLYRPGHYDILYKIGLGSSPLLPCCP PLPGARHVTEVFLWL
1642	9693	A	2587	1	326	HSVNRKRLNRNARRKAAPIRE/CVRGLG FRVAVGLGRDGRDDGSAMSLFAGSSHI RHAWDHAKSVRQNLAEMLAVDPNRA VPLRKRKVLTWQGLGPCLLYSSPAILT
1643	9694	A	2588	879	1528	AAGAVVSAMPKAKGKTR*QKFGYSTL RKRMSRNARRKAA/RAGLECSHIRHAW DHAKSVRQNLA*MGLAVDPNRAVPSR KRKVKAMEVDIEEEA*KNLYRKPYVLN DLEAPSLPEKKGNTLSRDLHLMYRY MVENHGEADYKAIAIRDIEKNYYQDTPK QISELRSNVYKRFYPAEWQDFLDSLQK RKMEVKVPGLHHSCPSAEASPGPSEAG
1644	9695	A	2589	1	310	
1645	9696	A	259	660	1200	LTVGKKNRKQQQHQPSPHGKPHLKGG QPSKVQIEDKFLGR*GKELKNPFTTQKG QSGFVYSKLIHNTSYRQGHSPGWRLRW MN*QK*ASEGG**QTSLS*RSTL*PNILER IPELKDWFISKIRQK*KRIKRKEENLQ*V WGYI*RPILQITGIPERRVEISMHWVRAC SFSSVKFVIP
1646	9697	A	2590	1	716	SALQRLEKKPKPRPPERSPRPRWVPEPQL EVGGACSAQAQSPSEKLDPAACKPLS*S* IRRRRPTPAMLFRLSEHSSPEEEASPHQR ASGEGHHLKSKRPNPCAYTPPSLKAVQR IAESHLQSYSAILNENQGFGRGREDLGE FWELGYPREDEEEEEEDDEEEEEEDSQ AEVLKVIRQSAGQKTTCCGQGLEGPWERP PPLDESERDGGSEDQVEDPALSEPGEEPQ

						RPSSEPPT
1647	9698	A	2591	39	370	RGWSLVQTPNPRFKNVPGPPTPQVIAEC EESQCGGLGTLGGL*LSPGPG*TDSRGPP MMPSEAQGGGAASKGPLGPPQAAGIHQ GTPLRMGEALEGQAGQTAGPRVQDGL
1648	9699	A	2592	229	358	
1649	9700	A	2593	257	386	
1650	9701	A	2594	217	398	KAWWNLLRKSEPKSCGS*GGLSTRERL VECSSLGLGYCG**LCHLQEPHYGSLH RMSS
1651	9702	A	2595	1	3386	
1652	9703	A	2596	442	2093	CGFLQMGTVINHNIPGPEGYWHFFNF KALLARAAVGAARGIHIHRCGLTKRPDA RRRRVAGAAGREPAISLPGDRAAGARAT RTRGPGPAPKMPAIAVLAaaaaaWCFL QVESRHLDALAGGAGPNHGNFLDNDQ WLSTVSQYDRDKYWNRFDEVEDDYF RNWNPNKPFQALDPSKDPCLKVKCSP HKVCVTQDYQTALCVSRKHLLPRQKE WGTWAKHWGLDL*ILVKCKPCPVAA QSAMVCGSRWATPNSIPCKLEFHACS TGQK/SFATLCDGWPCCSSQSLEPPKHG RKGVPCDTELRLNASRLKDWFGALHE DANRVIKPTSSNTAQGRFDTSLPICKDSL GWMFNKLDMNYDLLDPSEINAIYLDK YEPICKPLFNSCDSFKDGKPLNNEWCLL PSQNPGLP/CAQNEMNRIQKLSKGKSL LGAFIPRCNEEGYKATQCHGSTGQCW CVDKYGNELAGSRKQGAVSCEEEQETS GDFSGGSVLLDDLEYERELGPKDKEG KLRVHTRAVTEDEDEDDDDKEDEVGYI W
1653	9704	A	2597	1	844	LHQQAAVAWLPTSFLPSQEHCCSTEW APQPAASGVHGICFA/RPFASSTVSTEVS GSFCYLPAPWVYGFL*TERPLAWWCL GKYWLQELLGCHPVPLAML*DCLALLK SSLVPMGSPTHCKAIVTEPLHLPEAAA AAHTSSPSSCRCKGCLGWVWPGGSAP GPLGPLSFDPTVSHQSGPSAAPGPTTS SS*RPSAPSHGMQGLADSQGHLCRHSRK GLRSFLLSHTHSTCPHLLQTGMPSPL ISIDADSSPRIHRLRGQGHFSGLAKGGQ R
1654	9705	A	26	238	446	GFVVSLSR*QWESRSSIHAIVTN*ASS SSSSSSSSFSRVYPRFIEYLHKDIQSTG QKSPDAWVAGG
1655	9706	A	260	1	680	EQCRSPARARLPQDPDPAEERRTPYP GSIGAPAGEGKVPGLVIYLLWPWQNQDE ALSCLPSEAYSLRQHGLPLAVNTMSAG GGRAFAWQVFPMPCTCRVYGTVAHQD GHLLVLGGCGRAGLPLDTAETLDMASH TWVALAPLPTARAGAAAVVLGKQVLV GGVDEVQSPVAAVEAFLMDEGRWERR ATLPQAAMGVATVERDGMVY/VSGGNG P*HGPPPGPT
1656	9707	A	2602	144	520	IGKEEIKLLFPDNLMEYTVNF*MYKPLE LIS*FSKVTEYQVNTK/SNCIYT*QLQIE NEIAKTI*FMIASKSIKYLEISLTKCNKW RDILCICIGRLSHKVLVLPKLMCGGEKIF NPNTGFW

1657	9708	A	2603	105	440	RSTDPVCLGIRSSGCRTADFPREP*MLLS DRSSGSFVSEYPAV*SVSLPLLGECLPV RLLRDGHWS*HDSOSS*VFKMADNFPA GFHRLGRSGDGRAEHRRCCLASQRCC
1658	9709	A	2604	1	1047	
1659	9710	A	2605	1	690	
1660	9711	A	2606	210	424	
1661	9712	A	2607	651	835	PRWSRFPDLVICPPRPPKVLGLQA*AIVC ASISITKMWLRNAGLTSSMNWPRRSARV LSVS
1662	9713	A	2608	198	755	
1663	9714	A	2609	1	1305	MMRAHAPPTAVPACTAPRAPPPRDHRA GIAREALGRGTGRSGFRDCLGTREVALQA REKAQAAAQQGEAGCSAHWVRHTRGA APEGRPRVPRAAGVLTGCTVFRRTWIQR DAQIARQERWAKGESGPWGELRGLAT QPAVRASGRRGRRLERQDILEVFRCLAA SWNGGFGAVKPEVADARSGLGSGDSF CLVSVSLTKTAKKGLELKQNLIELRKC VDITYKYLFIQSVANMRNSKLDIRNAW KHSRMFFGKNKVMVALGRSPSDEYK DNLHQVSKRLARGEVGLLFTNRTKEEVN EWFTKYTEM DYARAGNKEGFHC*A WD PGPLEQFPHSMEPQLRQLGLPTALKRG VVTLTSDIYEVCKEGDVADPRARASRS* KLFGVMRWLNFKVTIPNYMWDQSQRG QQIGKTDLPESAISEFPEESDSEDD
1664	9715	A	261	1	403	RTRGQLNRGVYGPRLSLVSPSTLAGAPL AGRLDETSGEEQTLTLCGKMSGPTQPP AEGTEGTAPCGGAPVPPNMTSNRRLQQ TKAQVEEVDIIPVNGDNVLGRDHKLRE LDDRSIDALQARA*PFESSAAS
1665	9716	A	2610	319	632	GEPNISGMSLPWGGPSGTGMPAPAMPL PAMTPQC/C*GQGPVGPCAS/CASA/CFR CGL*AGRFC/G/PCPGHC*CFYFSNSVFPN VECMGLREPAVLPAFHLGEEAGRISSGQ GRSQNLPA
1666	9717	A	2611	156	621	LHVPMEQLQSHSKDEVSPTYLGMISLPGVA PLGSTGDASPCHAPRPWTPQCSKGQGP CCAP/WCP/CCP/CPPCPWSHGCL*LLCDP CPPPALPAAEGQQPLCKLASAVSGVVS LGNFATCPWLLMRPASSPRWKAGRTA GSLRPIHSTLGNTFEK
1667	9718	A	2612	1	585	
1668	9719	A	2613	1	1047	
1669	9720	A	2614	1	1674	MRSQGEVRRYLKRQSCRFLGSRKDM VTPSASSVCLIDEQIPAAGESYDIIDPRSK HKFKIHTYGSPTFCDHCGSLLYGLIHQG MKCDTCDMNVHKQCVINVPSLCGMDH TEKRGRILYKAEVADEKLHVTGKACSSR SSIVGRHLDEGYTDIKAGQLDAFLCISS QPPFGKNAIITSSSSSIITLLKHGPRRFYSF ASCSMSSTVSVTNPKILGKFIDSVVW TCHPGPMDCDWRADMGWGPVRLCIWF S

1670	9721	A	2615	3	2089	RPQLPGGGKRWLGGMADVFPNDSTA SQDVANRFARKGALRQKNVHEVKDHKF IARFFKQPTFCSHCTDFIWGFGKQGFQCC VCCFVVHKRCHEFVTFSCPGCG*GDPTL DDPRRQATRFKIHTYGSPTFCDH/CVGS LLYGLIHQGMKCDTCDMNVHKQCVLN VPSLCGMVHTEKRGRIYLKAEVADEKL HVTVRDAKNLIPMDPNGLSDPYVKLLI PDPKNESKQKTKTIRSTLNPNQWNSFTF KLKPSDKDRRLSVEIWDWDRTRNDFM GSLFVGSELKMPASGWYKLLNQEELG EYYNVPPIEGDEEGNMELRQKFEKAKLG PAGNKVISPSDRKQPSNNLDRVKLTDF NFLMVLGKGSFGKVMLADRGTEELYA IKILKKDVVIQDDDVECTMVEKRVLALL DKPPFLTQLHSCFQTVDRLYFVMEYVNG GDVLMYHIQQVGKFKEPQAVFYAAEISIG LFFLHKGRIYRDLKLDTVMLADSEGHK IADFGDVQGN*WDGSHGPGTFCGTPD YIAPEIIAYQPYGKSVDWWAYGVLLYE MLAGQPPFDGEDEDELFSIMEHNVSYP KSLSKEAVSICKGLMTKHPAKRMGCGPE GERDVREHAFFRRIDWEKLENREIQPPFK PKVCGKGAENFDKFFTRGQPVLTTPDQL VIANIDQSDFEFSGSYVNPQFVHPILQSAV
1671	9722	A	2616	1	1136	MTQISNIKQPFAMQHRFFISLLHWTQIV YPALFLGLCERGRNGRCDQVPEGSVLSL LVWVVPGLAFPEVAPGTCGTSYVPDAG LHGPEVESKLGLDPSMTGTQPTRTPAQ PAAAEPPALTGPGRVHQEQAVLACGFLG IYHLGAASALCRHGKLVKDVKAFAFA SAGSLVASVLLTAPEKIEECNQFTYKFAE EIRRSQFSAVTPGYDFMARLRSGMESILP PSAHELQNRHLHVSITNAKTRENHLVST FSSREDLIKVLLASSFVPIYAGLKLVEYK GQKWVDGGLTNALPILPVGRVTISPFSS GRDISPQDKGQLDLYVNIKQDIMLSL ANLVRLNQALFPFSKRKMESLYQCGFD DTVKFLLENWFE
1672	9723	A	2617	118	1018	VTARPRASRLKGLVQHGSVPGLHCATA RMKHINLSFAACGFLGIYHLGAASALCR HGKKLVDVKAFAGASAGSLVASVLLT AP/EKKLEECNQFTYKFSSEEIRRSQFSA VTPGYDFMARLRSGMESVLPSSAHELAI QNRHLHVSITNAKTRENHLVSHFFSSRED PQLRSLLSPASFVPIYART*SLVEYKIGQ KWVDGGLTNALPHPCPVGRVTISPFSG RLDISPQDKGQLRSVCLISAKQDIMLSL ANLVRLNQALFPFSKRKMESLYQCGFD DTVKFLLENWFGIKCIKVL
1673	9724	A	2618	60	388	GLDSFSATETRRHTNTNTEPHSQSQEPSNG EPQKEEPAESRDPTPGQQTEEDQDTAEI PVRDMEGDLQELASVKHRG*ILDGSSV KVKIIPKEEHCKMPEAGEEQPV
1674	9725	A	2619	1	4123	
1675	9726	A	262	72	276	AIQFSVYICVPGICISPDREKRDRGKDG GRHRTRWRQGE*KGEVGRERRRRGRER DRQRDRDRIYSPD
1676	9727	A	2620	71	547	KQIPSLPISRPSVLAVMVTMTLKVGAPP MLFIQSVVNPSVSCSSESRTTVYFWPPSV SPFMTKLDQSLPTRTPSAGVMLRKVFP PTSREKPTCFSSNA*KELP*GWQESGCSR QCPLSSRETCRASCINESANARGEAVCV LGARVVFLFTSETGNS
1677	9728	A	2621	241	452	ENVMLCIIRAKEKNHMITLSYTVKAFGK LKTFFMIYKNKPQKTLMSIRREGNTFNPI KGRFEKNS/AGNIIINGIGLNAF/PIKSEKK VEYLLFFQFSIILEI*INAIK*EK*IKGRFE KNSEVTLY

1678	9729	A	2622	1014	1432	SARLSLPKCWDYRREPPCPASFLYLKNII LYIIRAKEKNRMITLSYTVKAFGKIENFF MIYNNKPQKMLYMMRTEGNTSNPIKGR FEEPTGNIILNRHKIGCFSIKSEKKVEYLL LLF*FSIILEL*VNAIK*EKLIK Y
1679	9730	A	2623	55	316	NFWGGGAPKAPPPKKGFFPKIPRGVLNR PPQKEKKLFFPPPVKLGPPKDFLKRAPP* TPKKFFFPKP/YKFLGGGGPKSPPPKR VFSQNPGRGFKSPPPKRKKIIFPPRKIGPP QGFFKKGPPPLFIFFCLFPAFMETTCFFSK SLSKKFTKTK
1680	9731	A	2625	1	963	PTRPPNFHSPHTSPA AVGSAALRCSGRR RSLEVATSLPHSPGPRPAADVKMSSSEE VSWISWFCGLRGNEFFCEVDIEDYHPGT NFNLTDLNKQVP/HYRTSSKP*SLDPEPD VEELVEDNPNQSDLVEQAAEMLLWDLIH ARYIPLPTRRHRPRCLGKVPKGDGFGYC VPRVYCENPANCPIGLSDIPGEAHGESS YCPQ/CAMDV*HTPSQSRQPSTRMGA*L RATGFPSHGSFMVAIPELPGPKRPAQPSF VA/RGFLRGFKIHMPMAYPAGSFQGRPAT FKKPQFKTDSLIPSPTCPAVFCLFLSLPT LSGTYLGF
1681	9732	B	2626	44	403	MKALILVGGYGTRLRPLTLSTPKPLVDF CNKPILLHQVEALAAAGVDHVILAVSYM SQVLEKEMKAQEORLGIRISMSHEEEPL GTAGPLALARDLLSETADPFFVLNSDVIC EFPFQAM*
1682	9733	A	2627	159	309	IGPSLALGSKVFLQKKQSLLFIRCWLIIQA LQDLWPQGWNTAEMGWA*QMG
1683	9734	A	2628	545	2302	AACAPSPRTESSTVSSLPLLOCELLGAMK ALILVGGYGTRLRS/LTLSTPKPLVDFCN KPILLHQVEALAAAGVDHVILAVSYMSQ VLEKEMKAQEORLGIRISMSHEEEPLGT AGPLALARDLLSETADPFFVLNSDVICDF PFQAMVQFHRHHGQEGSILVTKVEEPSK YGVVVCEADTGRIHRFVEKPQVFVSNKI NAGMYILSPAVLQRIQLQPTSIEKEVFPI MAKEGQLYAMELQGFWM DIGQPKDFLT GMCLFLQSLRQKQPERLC SGPGIVGNVL VDPSARIGQNC SIGPNVSLGPGVVVEDG VCIRRCTVLRDARIRSHSWQESCIGSGG SWKLLTIDQDLMVAQFSTPSLPTLKVG FLPSAGKEQSVLWVSLEEAEPIDHIGI RVLQPPPRARECAEVRMENVTVLGEDVI VNDEL YLNGASVLPKHSIGESVPEPRIIH DGGFAEEAVLVVHQVLVD TGSTTGEGM RTALHVPTALPTTKLWG PLLADLWAQG WDTAEMGGGSCCLGRCRGQVRQDLFQ LGQLIGTDIIRIWGVVGSVKSEVAEDVMP LEYSQPTTLLFLRLLTRPSRPF
1684	9735	A	2629	124	1315	RARGRARRWECAAGTGQACGRHLRAR DTPSTSAGAMKALILVGGYGTRLRPLTL STPKPLVDFCNKPILLHQVEALAAAGVD HVILAVSYMSQVLEKEMKAQEORL*IRIS MSHEEEPLGTVGPLPLARDLLSETADPF FVLNSDVICDFPFQAMVQFHRHHGQEGS ILVTKVEEPSKYGVVVCEADTGRIHRFV EKPQVFVSNKINAGMYILSPAVLRRIQLQ PTSIEKEDLPIMGKEGQLYAMELQGFWM DIGQPKDFLTGMCLFLQSLRQKQPERLC SGPGIVGNVLVDPSARIGQNC SIGPNVSL GPGVVVEDGVCIRRCTVLRDARIRSHSW VESCIVGWRCRVGQWVRMENVTVLGE DVIVNDEL YLNGASVLPKHSIGESVPEP RIIM
1685	9736	A	263	166	396	PQIPPPGIPRKRENLSREPGG/PNPWGG* A*FPLLEKFLGKKNLGPFGGPTPFPFP NPNLLGGPKGGDQKAGKKP

1686	9737	B	2630	162	276	MGRRANESLNVLIYHFLFQKGVCQRL QLVQVVLQHLLX*
1687	9738	A	2631	2	292	
1688	9739	A	2632	3	2111	SSCGLGGQHGLGAARVRSLFKEARARA PCIVYIDEIDAAGKKRSTTMFGFSNTEEE QTLNQLLVEMDVFYAKIEELKLVNRRAE TGVSLSRCSTQK*KS*NWCILITVFYAAIE ELKLMYPYHGVLCSSRRKLSSCSNKEMT QSEKSQA*YRMTPLGMGTTDHVIVLAST NRADILDGALMRPGRDRHVFIDLPTLQ RKGVALSPRLECSAAITTHCGLNLQGSS* GARTTMGVRRRAG*FLTESRCVAKAGV QAAISAHCNHHPGEA/RKIFEQHLKSLK LTQSSTFYSQRLAELTPGFSGADIANICN EAALHAAREGHTSVHTLNFYAVERVL AGPHGFQLWESSGFLPEEWGQLLCQTLQ NTPGFSPTALRGREDWRCLCTENLFSC NHLLLCGNRKAFYNSSKAGRTEWEPQA S*KKIHDVLECSGPRADSSCTEWTLTDV WKI*DRK*SLTRTAKKSKILSKEEQKVVA FHESGHALEGWMLEH/TEAVMKVSITPR TNAALGFGQ\MLPKDQHLFTQ/ESSFERR FIALGGRAS\EHFSLNEVTS\GAQDDLRLK VTPIAYSMVKQVGMAPGIGPISFPEAQEG LMGIGRRPFNQGLQQMMDHEARLLVA\ KAYRHTEKVLQDNLDKQLALANALLEK EVINYEDIEALIGPPPHGPKKMIAPQRWI DAQEEKQDLGEEETEETQQPPLGGEEPT WPK
1689	9740	A	2633	2	2416	FQANMAVLLLLLRALRRGPGGPRPLW GPGPAWSPGFARPGRGRPYMASRPPGD LAEAGGRALQSLQLRLLTPTFEGINGLLL KQHLVQNPVRLWQLLGGTFYFNTSRLK QKNKEKDKSKGKAPEDEEEERRRRERD DQMYRERLRTLVIIVVMSLLNALSTS GGSISWNDVFHEMLAKGEVQRVQVPE SDVVEVYLHPGAVVFGRPRLALMYRMQ VANIDKFEEKLRAAEDELNIEAKDRIPVS YKRTGFFGNALYSVGMTAVGLAILWYV FRLAGMTGREGGFSAFNQLKMARFTIVD GKMGKGVSFKD VAGMHEAKLEVREFV DYLKSPERFLQLGAKVPKGALLGPPGC GKTLAKAVATEAQVPFLAMAGPEFVE VIGGLGAARVRSLFKEARARAPCIVYIDE IDAVGKKRSTTMSGFSNTEEEQTLNQLL VEMDGMGTTDHVIVLASTNRADILDGA LMRPGRDRHVFIDLPTLQERREIFEQHL KSLKLTQSSTFYSQRLAELTPRFSVADIA NICNEAALHAAREGHTSVHTLNFYAV ERVLAGTAKKSKILSKEEQKVVAFHES GHPLVGWMLEHTEAVMKVSITPRTNAA LGFAQMLPRDQHLFTKEQLFERMCMAL GGRASEALSFNEVTSGAQDDLRLKVTRIA YSMVVKQFGMAPGIGPISFPEAQEGLMGI GRPFSSQGLQQMMDHEARLLVAKAYR HTEKVLQDNLDKQLALANALLEKEVIN Y*/EDIEALIGPPPHGPKKMIAPQRW/VS DAQREKQYLGEEETEETQQPSLGGEPT WPK
1690	9741	A	2636	350	1256	LCLFPLPARKMATNFLAHEKNLVDKFK YDDAERRFYEQMNGPVAGC/ASRQENG A\TVILRDIARARENIHKS LAGSSGPGASS GTSGDHGELVVRIASLEVENQSLRGVV QELQQAISSEARLNVLEK\TPGWHRAT GPQTQHVSPMRQ\VEPPSPRSPPTAEG/ DARDDIALFGSDNEVEDKGGGTSRE E/RGFREFPGEKRPKKPRLVAQLSFLG* NPWDR*KDMAQLEACVRSIQ/LGTGRS WGASKLGAPWATGIRKLQIQCVVEDDK

						VGTDLLEEEITKFEEHVQSV DIAAFNKI
1691	9742	A	2637	1	304	GKTFDFTFCPLGPALVTKDSVADPHLKI CCRVNGKVVQSGNTNQMVFKTEDLIAW VSQDVILTGTTPPGVGVFRKPPVFLKKGD EVQCEIEELGVIINKVV
1692	9743	A	2638	1	927	
1693	9744	A	2639	3	847	PSGSDFAAAVVPRLDAVTGASQAQAPAA LDLPPREP*LSAGGPVAAAAAARALAAQ LPVLPREVTFLAPVTWPDKVV CVGMN YVDHCKEONVPVPKEPIIFSKFASSIVGP YDEVVLPPQSQEVDWEVELAVVIWKRK ASTSR*SGKGGLPVQSAEAPAPASPSD LTHQHTVPAVPDTRKQSASLLPDTAFPF THLWLALATNMG*QLRDPLP*VLVSPMI *PPVWP NPLPP*ATDAMAHVAGFTVAH DVSARDWQMRRNGKQWLL*KTFTFCP LGPA
1694	9745	A	264	3	413	SSYRWPSFPILKTCRGPMAPSLSFPGSFLS GLSVPLPLHHPPCPT*LKAAYPNCQLWP FLASVAPDTAPPECPSCFLLQRAQA/PPF LLDLFPYDC*GLCCT*PHQPRGNPLTPRQ GLWLGLKTHCMGTAKAGPIPR
1695	9746	A	2640	2	562	ITPRFHLICISDPHNLKICCRVNGEVVQSS NTNQMVFKTEDLIAWVSQ*VTRAVLSAP LHLPHMWRLT*ALHLWLWPLSQPLVSL GPFALLQFVTFYPGDVILTGTTPPGVGVF RKPPVFPQGRFSEKQREQGPPKPLAGLPS DLRSTGLCMCV*RKGLTLSWPALLQKG DEVQCEIEELGVIINKVV
1696	9747	A	2641	867	1476	LVPVLRRLPLTSRPASPSAQEDRLPPP RRQEVNWEAGELAGVIGKKGKPIKATDA MAHVGGFTVAHDVSARDWQMRRNGK QWLLGKTFTFCPLGPALCDQVTGVAD PHNLKICCRVNGEMVPERQTPNQMVIS RQRT*IALGLPSLVTLPPGDVIPNLGPPH LHPGVGVFRKPPVFLKKGDEVQCEIEEL GVIINKVV
1697	9748	A	265	646	1333	EPGMWQSPPSIGCPHRTGQASCA\SPPS TGLS*IPAFPGWRPA\WHLHPLLTSPCTC* L*SLGVFPVPPQPWSTPSQDLNDIFPV PPSYRWPSFPILKTCRGPMAPSLSFPGSFL GLSVPLPLHHPPCPT*LKAAYPNCQLW PSSASVAPDTAPPECPLLLCFRGPSPILL TSPICLLRTLQLSSPASGESHYPPQGRAV GWA EKPSAWSTRSLALGFPMNNNEN
1698	9749	A	2651	28	352	VRVWVGNAGCRLCFRADGVASGVGCA WDGDRMCLPESFIRAPVLSVSTAGPQSS QGSSGRSATPGEAQGINRTLPSPALPSP PMAPPPSYLVGTSPAPHSDDG CW P
1699	9750	A	2652	1198	1889	LKLPIFRDLKVQCGWVELENRLTKMLLS TSVLSCFSSRPNMSEVSCNCRYDYLEWP EYFMAVAFLSAQRSKDPYSQVGACIVNS ENKIVGIGYNGKPNGVHNSLFP*RRTPK NKLDTKYPYVCHAE LNAVLNKKFRPDV KRPEVCMFALVPPGK*NGGLSLII/LQAGI KRKLIFHV LINYPG*LTGATA\ARLLF*YG PGVTFRKFI PKSKIVIDFDSINSRPSRKL Q

1700	9751	A	2655	1099	1712	CALGEGNSGHRAFSKDRARLRPGWWSG RAKDELGKPKPLGPS*RRADRR*GQSAC DSSPPSGPGP/TGDGARGRC*AARPGPRA RRRLGPSGEDRSCQMGTGEEHHGRLW GLSVGPAPKPESAPSSLTCPREETPGRGR PPAPQFQSLARSHGIRGAGDKPTEEKSL PQQRHRGGASSVGRGPLGFPLEEAPLP YPWPPNLQ
1701	9752	A	2656	1	900	
1702	9753	A	2657	465	1269	TSSSCSCHPPNACCRGTSSVLSQKAGQ APHLPGPTGKPLRSSGSLRAVRAPGPIGG GQAPWSDPPVLQAPRPPQAPRGSWRG AGPRQPGRDAAPRMLLPQPRYRTLQPP RLLMPKKNRIAIYELLFKEGVMVPKKD VPIKHP ELADKNAPNLRVMKPMQVSQ GRGGYVKGF AWRHFYWYLTK*GSK COLHTEAARLGQP/DIHT*RTAL*PATG HLSMRARSLEVQRPTAAPSGPSWLSLLQ KGMWTGKNEDLHFRRCR
1703	9754	A	2658	1	433	
1704	9755	B	2659	140	480	MVFEFLYKMCVMAAYFGKISEENIKN NFVLIYELLDEILDFGYPQNSSETGALKTFI TQQGIKSQHQTKEEQSQITSQVTGQIGW RREGIKYRRNELFLDVLEKVNLLMSPQG S*
1705	9756	A	266	268	926	ASCTPFPTLPVRGRLGYNPDSPGTSNAH WAGDNEMSLVGLGPVTKPYPHGALPQG WGSWWVRGLSRTPAVTSLQGLCSCVLE TCWGPGEAWFLSPQSVMDLES PRSPA DPQDGLGVYGLASSWTNVQPTWNTSR IGSACQA/RSEFNKSHLFIFLEGET*GPQK GGGVPPKPHYKAPMQSPGPILWTQPRAP PTGAIYFFLQMGPPWRFSLFGVGG
1706	9757	A	2660	100	1674	SAAMIGGLFIYNHKGEVLISRVYRDDIGR NAVDAFRVNVHARQQVRSPTNIARTS FFHVKRANIWLAAVTKQNVNAAMVFEF LYKMSDEMAAYFGKISEENIKNNFVVH YMELLDEILEFGYPQEFRD/SGALKTFITP AGHSRSSGFRQKEGSSQFTSQVTGQIGW RREGIKYRRNELFLDVLESVNLLMSPQG QVLSAHVSGP/VWVMKNYLSGMPECKF GMNDKIVIEKQKGTADETKQEPGNSQL LIDDCTF/HTQCVRLSKFDSERSISFIPPD GEFELMR YRTTKDILPFRVPLVREVGR TKLEV KVVIKSNFKPSLLGQKIEVRIQPP LNTSGVQVICMKGKAKYKAGENSFVW KIKRMAGMKESQIQRRGFELLTNDKK KWGC/RPFFPMNFEVFPAPSGLKVGYL KIVLNPKNYSDDHVIK WVR*UGRSIGY ENSACKATRQLAQLPQPFLLQVQVPLL PQTHQVSPSLPALLPSPLHQARSLRSGP KQHYKVGPEPALGLPGQGEF
1707	9758	A	2661	1	356	
1708	9759	A	2662	303	774	DPKSCGRWRRGRNGELADLQAESHR ARAAGRGLPGALARVQPEAAAAEVGAR CGRGAENSIDFVSRELCAHSIRKLQAH VLLIKAVHGYFDPRENYSDESLSFMDT MKSTLKERFQFVEVPGNHCVHMSEPQH VASIISSFLQCTHTLPAQL
1709	9760	A	2663	572	902	GALARA*PPQQRWVSCPR/GVP/GAL*RE FTMFLSLQAENSIDFISRELCAHSIRKLQA HVLLIK*VAQAGAQRSQLTGYGSLTWA CPPLTTVKSHGTAPPHLLHEPSPTDLPP SMTLLPGGLPKKDLES
1710	9761	A	2664	1	398	PNPLSTQMGTSGGKGHQUELLEYSPPGGP PPGPRKQFHCSPPPPNPASGKKGH/SPPL /SPHSFSKVKNQAPPPPTPTPKQERKS* LKMLFNFSAPVDPTPAQMAPPGLFVPS SPPLHRLPPQAWGQRHSQQ

1711	9762	A	2665	119	496	TGAVSFQMPEETQTQDQPMEEEEVETFA FQAEIAQLMSLIINTFYSNKEIFLRELISNS SD/GEPMGRGTKVILHLKEDQTEYLEERR IKEIVKKHSQFIGYPITLFVEKERDKEVSD DEAEKEDN
1712	9763	A	2666	1	235	
1713	9764	A	2667	1	2424	RKVREASGKSAARWAGPSLYKAGAGV ARQLLQRPVAVPLVLCGHLAKMPEET QTQDQPMEEEEVETFAFQAEIAQWISLII NTF*LETKRSFLRELISNSSDALDKIPVLN A*HDPHSIRPLGKELHITLLPDQTKIRTLL TIVDTWNLE*PKADLINNLGTIA/RSLGT KAFMEALQAGIADISMIG/QFGVGFYPAI YLVAEKVTITKHNDDEQYAWESSAGG ISFTVRTDTG*TYGSVGTKVILHLKEDQT EYLEERRIKEIVKKHSQFIGYPITLFVEKE RDKVETDDAPQEKEDKEEKEKEEKEES EDKPEIEDVGSDEEEKKDGDKKKKKKI KEKYIDQEELNKTPIWTRNPDDLTMNE EYGEFYKSLTNDWEDHLAVK/HFFQFEG QLEFRALLFVPPTVLPFDLFENKKKKKN NIKLYVRRVFMNDNCEELIPEYLNFIIRG VGSEDLPLANISREMLQQKPKF*KFSRK NFGPKKCLELFTELAEDKENYKKFYEQ FSKNIKLIHVEDSQNRKKLSELLRYTSA ASGDEMVSLLKDFCPRMKENQKHYYIT GETKDQVANSFAVERLRKHGLEVIYMIE PIDEYCVPLKEFEGKTLVSVTKEGLE LPEDEEEKKQEEKTKFENLCKIMKDI KIEKKVEKVVSNNRLVATSPCCIVTSTYG WTANMERIMKAQALRDNSTMGYMAAK KHLEINPDHSIIEPLGPKAEADKNDKSV EGILVIWLKETAPPSSAFSLNPRTHAT RUYRMKPIGLGIDEDDPTADDYQWLLV TEENPPLEGGDDTSRMEEVD
1714	9765	A	2668	524	797	AVSPSEGEQERGEKRAAGCSRL*SQHF VRPRWADHLRSGV*DQPGQHGETPVST KNTKISWAWW*ASVIPATREAEAGEWL EPRRRRLQ
1715	9766	C	2669	102	323	
1716	9767	A	267	599	1420	SHLPSLSLLPRIPPEVIVGSEGPVVFPCP WGSCWGLSRTPAVTLSQLCSCVLETC WGPGEAWFLSPQSVMCDESPPSPADP /RGWKFRVYGLASSGQMCNHLAYSRL VLARHSELISPTYSFEGETEARG*GIPP KPHSRNAEPGPYTGHTWPLHTGTFTF SSQMRGPGSLDSSGGWIKTEGDKEKAPG LMGLKDRDTGTCYGCVCSKCPGQGLQA GGVLYLAQPPALIRLPNGPRPARARERR DWHHREETGFLLEATLLKARP
1717	9768	A	2670	146	804	TETRFSDSVAQAGPGTFGPLLLLALPRL TFSPLLSFPTVGTCKGNPLWAPKPCPALA APSGCRMTWKEQGRKMGVNC/PRPVAA CMCV*TGKRPPSPMFLSPRFSSETTRAA RGSSLPWVAGAWSASSDSPLPRSTAP RRSVCTHCGLTQPTRHACQKGAGVCVR GPRSEAKGGWRGRALLLAATPCPLSCP NLGLPAKVTPEQGLVRRGGRPAGP
1718	9769	A	2671	1	787	LNSRVEPRVRSRTMETKPVITCKLTLLIY SFVFWITGAILLAVGVWGKLTGLTYISLI AENSTNAPYVLIGTGTTIVVFLFGCFAT CRGSPWMLKLYAMFLSLVFLAELVAGIS GVVLRHEIKDTFLRTYTDAMQTYNGND EIRSRAVDHVQRSLE/SCCGVQDYTNW STSPYFLEHGIPPSCCMNETDCNPQDLH NLTVAAATKVNVQKGCYDLVT*FSWETN MGUIAGSGRLGIAFSQLIGHAGWACCL SRFHGPIQY

1719	9770	A	2672	1	670	YKVLIFT/SPCS/VDQLCSALCSCFRPKDT ER/LRG/APEGFSRTDLHLA/VVPVLTALI SYHNYLDKTKQREM VYRLEQGLIHRCP/ RQCVVALSICSVEMPDHIIKALPVLVVKL THISATASMAVPLLEFLSTLARLPHLYRN FAAEQYASVFAISLPYTNPSKFNQYIVCL AHHVIAKPLHRLQPSPLAMRWASGSAS SPRWRTSPSLCEAGALPPALALDGIACQ
1720	9771	A	2673	1	154	
1721	9772	A	2674	237	410	
1722	9773	A	2675	1	414	
1723	9774	A	2676	1	6371	MPDSCGLHIPAAHAAPSRDARIAGLSAR GRHRTTTPSKLPRRPSAQCRYRKCGSRF RRRPGARGVRLSPRRGGPERGGAAREGF SGASWSTMAKPTSKDSSLKEKFKILLGL GTPRPNPSAEGKQTEFIITAEILRELSME CGLNNRIRMIGQICEVAKTKKFEEHAVE ALWKAVADLLQPERPLEARHAVLALLK AIVQGGGERLGVLRALFFKVIKDYPSE DLHERLEVFKALTDNGRHITYLEEELAD FV
1724	9775	A	2677	1	5405	MAKPTSKDSSLKEKFKILLGLGTPRPNP RSAEGKQTEFIITAEILRELSMECGLNNRI RMIGQICEVAKTKKFEEHAVEALWKAV ADLLQPERTLEARHAVLALLKAIVQGGG ERLGVLRALFFKVIQGG/DYPSEDLHEVR LEVFKALTDNGRHITYLEEELADFLQW MDVGLSSEFLVLVNLVKFNKLVTLDE VQSQRNGFKMICLLCVRTASSVDIEVS LARLLDAVGLANNCLPAESLPLFIV
1725	9776	A	2678	1	5469	GASWSTMAKPTSKDSSLKEKFKILLGLG TPRPNPSAEGKQTEFIITAEILRELSMEC GLNNRIRMIGQICEVAKTKKFEEHAVEA LWKAVADLLQPERTLEARHAVLALLKAI VQGGGERLGVLRALFFKVIKDYPSEDL HERLEVFKALTDNGRHITYLEEELADFLV LQWMDVGLSSEFLVLVNLVKFNNSCYL DEYIARMVQMICLLCVRTASSVDIEVSL QVLDAVVCYNCLPAESLPLFIVTLCRTIN V
1726	9777	A	2679	35	239	SPSSQPPVPIPH*PVCKQPTSCRSRKR V LNLVGGGEGAASY
1727	9778	A	268	1755	2524	VPWGNPGSESVGLPGGRGLVTAPAVFLP PKPAPGFGAQHVRSRK/PSRRGQLIRAA WLTGSPVRPGQEMLGAGRGGASGRAG* GPAPYRKLSSASARGAGHPESGNCSSSG SGSTWSSSWGSGSSWGSRLSQEMV EEVL/HFIQGGAG*AGGTLQWALVSNLG FGVRQDDIVVVTIIGLHGSIEDGAGVQ GRSEAMEPRQAG/RTGEGWLGGHSETP HPPAGTSFCNLRPTVSREAPAGRRGAE SQTSLPSTSA
1728	9779	A	2680	118	359	AVCKQPTSCRSPPCPSPGCQASPC*AFRR LEI/CRAGF*A*ALGPGKSQGGQNCPRSSPP PSP/CPLLKYGQNCG*KCPQRLH
1729	9780	A	2681	229	455	TMQGS LNKPLPSP*PRAATKIPNP/SPSP PQPAPQTTPHSILSTKAMTPVTIQALFSRI VRYLCDRRDSLTSQSF
1730	9781	A	2682	1	373	

1731	9782	A	2683	72	1031	GCPRLILLRGRSGLEPGTFRKMAAARPSL GRVLPDSSVLFCLDMQEKFRHNIA YFPQ IVSVGSRMLKVARLLEVPMLEQYYPQ GLGPTVPEAGD*GPSAAWQKTCFSM/CC LPLQQELDSRPQLRSVLLCGIEAQACILD PRSYPGALATSLYPQNTTWDLDRGLQ VHVVDACSSRSQVDRLVALARMRQSG AFLSTSEGLILKLVGDAVHPAQFKEQKLI KEPAPDSGLLGLFQQNSLPLNSNPALR EDHPPVHPGPQWEARFPPSLGFPRVGAIP PGSCRPLVGGGQWCCLPIGQLLPEMQM RLLETGWEMG
1732	9783	B	2684	1	792	MGVLPSYFWDEEAEAEQEGICLSLKQRM PVGRAGHSGHFLADATSRALARREEW GKQEERG VKESSESTNTTSRMKTPKEDV RPGMTAFEPEALGNLVEGRSIDSILKTV SNSFSLGACCLLSFHVLLDGTAGRGSDR DEQNAHSVVPEQQARAHHPESHILM GDESACIAYIRTRSTWTLAASHAPSRRD PCLAPPGWQMADRPLHRSGAPSVLPHSQ DTDTEMNQERYMNASISFPKPPHSTSQQ VLFIQPGEEREI*
1733	9784	C	2685	10	126	
1734	9785	A	2686	2	370	HCIQQILEAVLHCHQ/MGVVHRDLK/PGE KKNQTLGRAVLLSFT*RRQLSLGLHQLH SLAPSAGTSWISLLILMVS VAGFAGT/PG YLSPEVLRKDPYGKP/VDLWACGG*RFS GPLPGVILYILLV
1735	9786	A	2687	1	1593	
1736	9787	A	2688	3	1607	IPGSTISCVKPVLC LHSAAACKWSLG SGAEQQLSPGPPVPSLTCLPSARMATIT CTRFTEEYQLFEELGKGAFSVVRRCKV LAGQEYAAKIINTKKLSARDHQKLAREA RNCRLKHPNIVRLHDSISEEGHHYLIFD LVTGGELVEDIVAREYYSEADASHCIQHI LEAVLHCHQMGMVVHRDLKPENLLASK LKGA AVKLADFLAIEVEGEQQACVGF AGTPGYLSPEVLRKDPYGKPVDLWACG VILYILLVGYPFWDEDQHRLYQKIKAG AYDFPSPEWDTVTPEAKDLINKMLTINPS KRITAAEALKHPWISHRSTVASC MHRQE ARGPA*KKFNARRK LKGAILSTMLA/T RNFSGGKSGGNKSDGVKESSESANTTI EDEATKVRNQENKVTQLIEAISNGDFES YTKMCDPGMTAFEPEALGNLVEGLDFH RFYFENLWYRNSKPVHTILNPHIHLMG DESACIAYIRITQYLDAGGIPRTAQSEET RVWHRRDGKWQIVHFHRSGAPSVLPH
1737	9788	C	2689	6	167	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXX KH*
1738	9789	A	269	3	389	GVS PCWPGWS*TPDLK*STRLGFP RCWD YRLLEVD PCTGHS LYL*KDPPVLPLPAEG CDYQGKEYALSSCCDKSYLLPDYRTKFL CCHPERGTWKLGTVG GCYAPIQSFGIAD EQAWLQH GSGAVYLC
1739	9790	A	2690	310	593	LQVISEYLFWRINFFLFLF*TVSLSVAQA RVQWRDPGSLQPLPGFKRFLASASRV ARVTGAHHLHAQL/LYF*VETGFHHVG QAGLELLTSGK
1740	9791	A	2691	58	481	LQVISEYLFWRINFFLFLF*TVSLSVAQA RVQWRDPGSLQPLPGSRDS*ASASRVA RVTGAHHLHAQLFCIFK*RQGFHPGWSG WSSNLPDLQANPAASALPKVPGITGTSPL HPPWSINFKNIKIWNQETSILVFFRL
1741	9792	A	2692	1	398	

1742	9793	A	2693	3	267	AMVGGGGVGGGLENANPLIYQRSGER PVTAGEEDEQVPDSIDAREIFDLIRS*AW PLTPQPAYWYPGPSSCQGCYRCFLESLT MRN
1743	9794	A	2694	1	942	
1744	9795	A	2695	3	707	AMVGGGGVGGGLENANPLIYQRSGER PVTAGEEDEQVPDSIDAREIFDIRRCWAR AGSGGLRWGEQ*YRAAGGAASQQGV GRGF*VGKGAESLFLHFPQLIRFLNDPE HSLTLEELNVVEQVRVQVSDPESTVAVA FTPTIPHCSMATLIGLSIKVKLLRSLPQRF KMDVHITPGTHASEHAGKCGLVVRVLA RAPPKQSEASPLHRSLWARLEMGNVCVSE IARDSSVWVIA
1745	9796	A	2696	2	604	ARSHRISGGGSAMVGGGGVGGGLENAN NPLIYQRFGEVPVTAGEEDEQVPDSIDA REVFADLRSHQMTPEHPALTLEELNVVE QVRVQVSDPESTVAVGFPPHSGTCR HGPPLIGLSIKVKLLRSLPSAFSRWDVA HLLPGDPLPQEHAVEQATLQIKEAGWAT ALGRTPHLLVVNQCLSSPAGTWAFAV PLSLA
1746	9797	A	2697	79	690	KVSKAIAGCLRNYGVCLAHLRTWAIPEP PKMNPVVEPLSWMLGTWLSDDPPGAGT YPTLQPFQYLAEVHISHVQAMLNFSF NSFHPDTRKSMHRECGHFHASKPDTNK VGLCQAPQNTGLGWNWKEGEVKRARS LCIRIPLPFARISFRQKPHVEQIT/RGKFR LNSEGKL*ADGSPMGNPRHSPMTQHH HDTYQEGEHRKP
1747	9798	A	2698	1	405	
1748	9799	A	2699	1	1437	
1749	9800	A	27	244	309	NPKGQKDREAPLSRSVFLKIKIKRAFAL LLHGRF*PSTPAASASPASKSPRSGKAL ASALFYIVQLTK
1750	9801	A	270	555	1181	RGPMPERPKQMTAVHCQGHQRGDSEIRN FRCHGPNSTRWGSPPHASASFSTCL*N KPKYFPWGISFLSFLSRRSLDSVAQAR VQWCNLGSLQPLPRF*QFSCIRLLSS*D YRCMPPCA/NYL*F**RQGFTI*ARLVLN S*PRDPPVLASQSAGITGVSHQARTFFLF FETTFHSVAHAGVQWHDLSLPPPPRF KRLSCLSLSSS
1751	9802	A	2700	78	399	FIHRPSDSGPPAERSPCRGRVCISGKKHS YPCSWYPLPKHTASCPISTSILTPLPLDL RIPLMWKDTEYFKNKGDLHRWAVFLL QLGEHIQDTEMIIVDRTLTYCI
1752	9803	A	2701	2	368	VVAGALGCSWLIGAGFLSGREGACRR ERGQQQTGTPLPSSLPLPSLEKRAGRTA ATKARLDTLCLEPLQLAFPPGDPTYPT SLSFSSLPLGA/WPPEQQWGEENLSQQP EGV*QELQDKGSFCPLPKSWPPL*RGG GARLQLARNRGWFPVWKGRGLQKGAG TAADRHTPAFLSPSPFSGKASWENSCH QSETGHSVPRAPSAAGLSSWGPHLSSLR FLFLPCLGSRQAPGAAGVGRGKFVTAARG GLTGVAEG
1753	9804	A	2702	1	588	VRAGELDQALGRPFTLSISNQYGDDEV HTLQTESREALQSWMEALWQLFFDMSK REGGWVEPLGRTGVCHFY*RPLFQDYV EGNVAGERAAWLSLLISALLPGQWKQC CDEIMKIETPAPRKPPQALAKQGSLEYE MAIEPLDDIAAETDILTQREGARLETPPP WLAMFTDQPALPNPCSPASVAPADWT HPL

1754	9805	A	2703	46	1825	AAAGSETGLGSCLEGKGAEGSGDSSRQ AHPCLPLSLSSLLWKSEDTLQRKLDHEI RLRKGPCKLLANLLPSEKQALEATKSL LVCNSRILASYMGEVLQARKEAQLLGKT SRRPSDSGPPAER\SPCRGRVCISDLRIPL MWKDEYFKNKGDLHR\WAVFLLLQL GEH\QDTEMILVDRTL\DISFQSNVLF AEAGPDF*TCGLELYGACVEEEGALTGG PKRLATKLSSSLGRSSGRRVRASLNSAG GSR/GAIPFMLPTPEVGGPRYHLLAHTTL TLAAVQDGFRTDHLTLASHEENPAWLPL YGSVCCRLAAQPLCMTQPTASGTLRVQ QAGEMQNWAQVHGVLKGTNLCYRQP EDADTGEEPLLTIAVNKVMGPLVETRVR AGELDQALGRPFTLSISNQYGDDEVTHT LQTESRGSTCRAWMEALWQLFFDMSQ WKQCCDEIMKIETPA\PRKPPQALAKQG SL\YHEM/ALFEPLDDIAAVTDILTQREG ARLETPPPWLAMFTDQPALNPCSPASV APAPDWTHTPLPWGRPRTFSL\DAVPPDH SPRASLRFAPLPTFSESPRTRGLLQAKGQ PRTWLQSPV
1755	9806	A	2704	1	370	
1756	9807	A	2705	1	363	
1757	9808	A	2706	158	301	IIMTLAEDLLCSAAQNSRLSAQRTQAGW LLISALMTLGNSL*KVYIP
1758	9809	A	2707	182	395	
1759	9810	A	2708	1	434	SSYIPFSIQIQLFPTHFTL*HPVSWKNC RK*TRENK/ITAELEIFQEGIKVLETLVT VAEEHHRAQLVACLLPILISFLLDENSLG SATSIMRNLHDFALQNL\MIQIGPQYSSVF KSLVASSPALKARLEAAIKGNQESVKVK I
1760	9811	A	2709	112	501	
1761	9812	A	271	80	599	SIQEKRSLGGEQSPTFLKELQEGTSWLLM AKLYEAVTFKDVAVIFTEEELGLLDPAQ RKLYRDVMLENFRNLL/SQWGINHAMEI LSTS*GKEKLWVMGTSSQ*ERNLGGKIQ TEMETVPEAGTHEEFSCQIWEQIASDL TRSQDTTISNSQLFEQDDNPSQIKARLST VHTR
1762	9813	A	2710	1298	8400	FPTNTTFPLLKVCYRFHYAEPVPGHCR AGVRREGADWGTGSADKQRGPFLLDY GKVWL\PCAQQNDVREKQKTLVEQLLSL LNSSPGPPTRKLLAKNLAILYSIGDTFSV HEAIDKCNDLIRSKDDSPSYLPTKLA VCLGSLYKKLGRILGNTFTDTVGNILKA MKSAESQGRYEIMLSLQNILNGLGAAAA PCHRDVYKAARSCLTDRSMAVRCAAAK CILELQNEAIFMWSTDLDVATLCFKSF EGSN
1763	9814	A	2711	2107	2424	TTRYLKKTSTTGQRKKRGRNGSFPTEN LVPSGTVTGSQQLGPPFR*N/HTEECWGP PTADGRAGKGPRQQPGRAQRIYRWDPS DGTTWHHRPCGSRGTDQPETK
1764	9815	A	2712	1	368	FRREGRPAGAGAFADSGGAPSSCCGPT VRPVAATAENVLHVGRGAFQEFVCOAG VQWRNHGSLRPPPP\GSSHPPISAS*VVET TGMCHHVWLIF**NFFVETGSPYVAQAL ILLMLGIKTL
1765	9816	A	2713	1	278	
1766	9817	A	2714	188	406	

1767	9818	A	2715	123	914	PRAGGCGGSGRVTACLCACATLVWPPR FQEVLLVLSGLVHARGCTYSQLWSRSH FCCSRGPLAMAGILFEDIFDVEGY*PEGQ EVWTECSRLHCESESRMDLILDVNIQY PVDLGDKFRLVIASLTLYEDGTLDDGEYN PTDDRPSRADQFEYVMYKIVYRIEGDIE TSTEAATRLASAYVSYGGLLMLRLOGDA NNLHGFEVGLPRVYLLMKKLSLLNLAL NQPSLPSHSGRGHCSSLGQPLFAHLLRK GWLTVHRWRHL
1768	9819	A	2716	1	2415	
1769	9820	A	2717	2	964	
1770	9821	A	2718	276	482	
1771	9822	A	2719	329	3354	PVRQFIFPKLPIRHCLAEVGGRGQTCA PRKWAVPIGLHSRATSQSGCGGGRSWL CSSLKMAAQPPRGIRLSALCPKFLHTNST SHTWGHVSQELLEIG*CLWIPDVNAKQI WGLTKQWINDHICLTFTDNGNGMTSDK LHKMLSFGFSKVTMNGHVPVGLYGNG FKSGSMRLGKDAIVFTKNGESMSVGLL SQTYLAEVIKAEHVVPVIVAFNKHQMIN LAESKASLAAILEHSLFSTEQKLLAELDA
1772	9823	A	272	1321	1913	VEMRRNQCKNSSNSNGLCVICPSNNHTS SPTRVLATWMNCLELHKYNV*IWIGKKII *TQENGKTQSEENKNNIKVLQELKDKVA GIIKKNLTDLNAPKNTLLEFHNAFTSINS RK/DKSDERISELEDWVSNIRWTKVN*NE QILHGGWDDIMRPILQITGISEREVEKSN NLENNVQDIIFESFPNLARKANSQIQE
1773	9824	A	2720	1135	1476	HGVSLLLPRLECTGH/VISAHCDPRLPGF EARFSLSLPASSWDYRHAPTHAQAKFCI FKWRRGFSHVGOAG*HFYFSPQVLGTN MEDFFLTGLILHGLFQEDSNAPYSFKWG SLR
1774	9825	A	2721	670	1253	ACYALNLFPKHTDIFYFFFIYFFCRDRGP RYITQAGLKFDVDFK*ILPPWPYQSVGIISV SHPPGPH*CILNAINKNYRYRN*LLY/IQ YPMLFGVFLRQGFVAVT/SAAVQWYDHG SMQPQLPGLRWFSHLSLLSGWEHRRTPP RLG*FCIFSRESFVMLPRLVLNSWGSNDT PALASQSVVITGMSHHAPAFPMFL
1775	9826	C	2725	95	310	MREYNLVVLGSGGVGKSALTQVQVQGI FVEKYDPTIEDSYRKQVEVDCQQCML LDTAGTLPRLTTYRT*
1776	9827	A	2726	1	1101	
1777	9828	A	2727	53	772	IPRSGITGSEGDYPVYKSMCLTAPSMALS RSSVFKQITSLREYKLVVLGS*GVGKSAL TVQFVHGIFVEKYDPSIEDSYRKQVEVD CQQCMLLEILDTAGTEQFTAMRDLYMKN GQGFALSIFYLQLQSTFNGLYRDLEGNQ ILRV*GTRE/VMFPMILVGNKCDLEDERV VGKEQQGNLARQWCTLALLESSA/RRSE IQVNEVLVYDPVRQINREY/IPVEKKKPK NSMSTLLGPVRRQL
1778	9829	A	2728	377	615	VPAQCSF*DTASCLLVKRKMRLDAVAH AYNPSTLGGRGGWI/TRGQEFKTSANM VKPVSTKNKISRWWHNRNPSSYSGG

1779	9830	B	2729	1	1224	MPTVGKAQARRRTRDTLLDITQVLIDQ SPRKDTGLAQQTGVIVPSKGIVKYWRAQ LKGDMMKYASPAFELFYFSVRAQSTDGIV TLLDPTTREDCDISSAPNPEVRTQRQAEV AGVGLLAVKVPRDEEGVLGGAPGPQKR SRVCGEPTLQRRSGPLVARPGSRCPPPT SVSSPVPDEYGRTVVMIRLDNPGISGRT IENNPPELEKQLPGEPSSENSPYLGPPQVLF LLRDPREDVMLLNQTPTTAEKQAVLQ AAEIFRNEQQISYNTSKGKKGDRECEEIA ETPFQIGSEAVPLDNPDPWNSSSSAGEWK RRHFLICILEGLERTKAKFLNCSKLSMVD QKPDENPAAFMERLREALIEQTSLSPDSV EKQLILKDKFVTQSASNIRRLQKQKQIGP ISTLKNLLK*
1780	9831	A	273	193	310	
1781	9832	A	2730	877	1536	TNFLFALSPSCLAGLLPPKFQFSCLSLLS SWDYRNFIYFW*RWGFTMLARLVSN*P Q/CDPHTSASHSAGITGMSHCAWS*TLNF FSYELFFSFTSALS*KDHCKGGHNMGCQ FT*MHQ*L*EKPP*LLFETESRVA/QAG VQWRNLGSLQPPSPGFKRFCSLSLPSW DYLRTPPRPANCCCIFSRDGVSPCWPGW SQSLDLVICPPWPPKVLGLQA
1782	9833	A	2731	3	643	RLEEDLGRRQSLAPVGVVETYFTTVVL WTTMGIQGGSVLFGALLVLAVLCHS GH*PCQC/YNGFLPQTADCQKQPFNCSS GFWMRVFTQKLGYQVYNKICWKFEHC NFNDRHNPA*RKMGTLILLCKKG/LRCN FTEARLENGGTSASEKTVLLLGELHFWA AAWEPSIPKSNTRECFLTCLPRSLRSSVF PLGWPHSKGLDIFQMGSWLGE
1783	9834	A	2732	11	431	RHLLAAPPAPPAAAAAAAAAALSHCLRSSG RLAPHTSRRLPRVVKRRVNALKNLQVK CAQIEAKFYEEVHDLERKYAVLYQPLFD KRFEIINAIYEPTEECEWKPDDEEISEE LKEKAKIVDEKKDEEKEDPKGIPEFW
1784	9835	C	2733	257	358	MILLVFLPXHQVFLERXQESEILHHLNTL ADVL*
1785	9836	A	2734	2	387	
1786	9837	A	2735	64	467	PAAWLPILVAARQLTVQMMQNPQILAA LQERLDGLVETPTGYIESLPRVVKRRVN ALKNLQVKCAQIEAKFYEEVHDLQKRY AVLYQPLFDKRFEIINAIYEPTEECEWK PDDEEISEELKEKAKIEDEKDD
1787	9838	A	2736	1	795	
1788	9839	A	2737	1	982	
1789	9840	A	2738	2	138	SARGAASCSSRCCRCRPESLPAQLRAA WLPILVADIWSSYNMADIDNKEQSELDQ DLDDVEEVEEETGEETKLKARSA*LFR MMQNPQILAAALQERLDG/LWVETPTG YIESLPRVVKRRVNALKNLQVKCAQKE TQFYEEVHDLERKYAVLYQPLFDKRFE IINAIYEPT/EKECEWETR*RKDEDFGGN WKEKGQIEDEKKDEEKEDPKG/IFPEFW LTVFKNVDDLSDMVQEHDEPILKHLKDI KVKFSDAGQPMFVLEFHFEFNEYFTNE VLTKTYRMRSEPDSDPFSFDGPEIMGC TRVPR*DWKKGKNVTLKTIKKKQKHKG RGTVPYCDLKPVSNDSFFNFFGPLPESSL RSGDLDDDAEAVLAADFEIGHFYRERIIP RSVVNFTGEAIEDDDDDYDEEGR*RS GRLAPHTSRRYLEFLQHGRH

1790	9841	A	2739	1	435	PRARAERPAPASSSPTSTRITPDTEVC IVERLFSSSLVAIVSLKAPRKLKVCHFKK GTEICNYSYSNTILAVKLNQRQLIVCLEE SLYIHNIRDMKVLHTIRETPNPAGLCAL SINNDNCYLAYPGS*SGEAGAGQLLFAN FNQDNTDTEVCIVERLFSSSLVAIVSLK APRKLKVCHFKKGTEICNYSYSNTILAV KLNQRQLIVCLEESLYIHNIRDMKVLHTI RETPNPAGLCALSINNDNCYLAYPGSA TIGEVQVFDTNLR
1791	9842	A	274	831	1102	HFGRPRQVDCLSGGVQDQPGQHGEVQS VLKLKKLAGHGGGAHL*SQLLWRLRHEN HLNLGGRGCSEPRWCHFTPATTEQDS V*NNNNNNK
1792	9843	A	2740	3	438	
1793	9844	A	2741	1	1336	MLRLQRIKTLRPPGCPHPMTTCSAGTLS AVPCVSPRQVVFERRFCLWHSVEMFT HVLFPVISADTEVCIVERLFSSSLVAIVS LKAPRKLKVCHFKKGTEICNYSYSNTI LAVKFNQRQLIVCLEESLYIHNIRDMKVL HTIRETPNPAGLCALSINNDNCYLAYPG SATIGEVQVFDTNLRAANMIPAHDSPLA ALAFDASGKLTASEKGTIVRFSIPEG QKLFERRGVKRCVSIPLAFSMDGMF LSASSNTEDTVHIFKLETVKEKPPEEPTT WTGYFGKVLMASTSYLPSQVTMEFNQ GRAFATVRLPFCGHKNILLG*PTIQIPR LLVGAAIDGYLYMYNLDPOEGEGECAL MKQHRLDGSLETTNEILDSASHDCPLVT QTYGAAAGKAYTDDLGAVGACLEDE ASALRLDEDEHPPMIIRTD
1794	9845	A	2742	152	1616	VQDPSPRARPPRPGPLAARPAMNLAQ SGEAGAGQLLFANFNQDNTVEKASRA AGLGRRAVWVSLAVGSKSGYKFFSLSS VDKLEQIYECTDTEVCIVERLFSSSLVAI VSLKAPRKLKVCHFKKGTEICNYSYSN NTILAVKLNQRQLIVCLEESLYIHNIRDM KVLHTIRETPNPAGLCALSINNDNCY LAYPGSATIGEVQVFDTNLRAANMI PAHDSPLAALAFDASGT*LATASEKGT VIRVFSIPEGQKLFERRGVKRCVSIPL AFSMDGMFLSASSNTETVHIFKLETVKE KPPEEPTTWTGYFGKVLMASTSYLPSQV TEMFNQGRAFATVRLPFCGHKNICSLATI QKIPRLVGAAIDGYLYMYNLDPOEGEGE CALMKQHRLDGS LGKRPNEILDSAISH DCPLVTS DITAGLAGKGTYPSSPTETCP TRDDLGAVGACLEDEGALRLDEDS EHPPMILRTD
1795	9846	A	2743	122	1162	LGLEGDGGASQWVGGRQLQDCRNRL QGSPETLIPP/SLQITVPSRTCFF/SLQVGL T/FPPRAVPSAAAAALGRNLRL*RGWHRRI IPPWVASISRAASSWG/TKPPLFKVPSQPE TLGETWVIKMAAGTYGGSNTLPRSPGG NFRSTVPR*VQTTPRQPGAGLPKPVVVA TSSD*QASRSSPGRSRKDGPDSPALPVS/ RGEPEPSLQPPPPSTR*PSRLRGPRPSPA LSGPLRAPEHAQSSTSPSRWTTSPRMLR APARAPPCPSPTLVPVSTPSPFP*RSQ* SGHTPGRFFPCSPPRIRASACASLGTDD GSTAYQIAHAPHHVFLTSLRAFLRLAGS CTNHG
1796	9847	A	2748	54	188	NMTKLQVVSKNLLLLKMLIKERETQRK GGSS*KSTQGAKGGAAPR
1797	9848	A	2749	572	857	GQKKGFSMGG*GEKGS LGNPSWGTAGG QAPVPPQGLTGTRFTQGSSGTAGPPAST FCLGGHGA VVGTYGRQMYMYEFVFC VGVAQKKDLCPRE

1798	9849	B	275	53	403	ALVTEFQETHSQDAIEHVLNLANFAYD PSNYQYLRQLQVLHLFLDSLSENETLV EFAIGGLCNLCPPDRANKEHILHAGGVPLI INCLSSPNEETVLSVITTLMLHLSPPGRSFL P*
1799	9850	A	2750	3	127	
1800	9851	A	2751	1	359	LILVKA AAAALDTGHLSPWFGVRCAFQNP GRRGCS/PEGKQLQSRVI*G*EFQSTAAC EEHYMASIRRSVSPSLSVCTSPSPVLDIL PPTDLYFEQHSPIL*LKVKGSLH*RSSPLR KES
1801	9852	A	2752	1	1270	MGATTMDQKSLWAGVVVLLLLQGEMG FCYVARAGLELLGSRPPASASQSAGITG SAYKLVCYFTNWSQDRQEPGKFTPENID PFLCSHLIYSFASIENNKVIKDKSEVMLY QTINSLKTKNPKLKILLSIGGYLFGSKGF HPMVDSSSTRLEFINSIILFLRNHNFDGLD VSWIYPDQKENTHFTVLIHELAEAFQKD FTKSTKERLLLTAGVSAGRQMIDNSYQV EKLAKDLDFINLLSDFDHGSWEKPLITGH NSPLSKGWQDRGPSSYYNVEYAVGYWI HKGMPSEKVVVMGIPTYGHSFTLASAETT VGAPASGPGAAGPITESSGLAYYEICQF LKGAKVTRGSRDQQVPYAVKGNQWVG YDDVKSMGDQGSVL*RFKTWGGAMIW SIDMDDFTGKSCNQGPYPLVQAVKRSLG SL
1802	9853	A	2753	385	570	KLGTEDQKGGRIILLVWAKLHQLSY*HI RVLSIGGN*GPGE*MGMPGVHLLFFRT KIRIQI
1803	9854	A	2754	1	1022	MTLAPSDQDLFVFRSGPPAAAGMPCLF PEVPFCTRVHQPTGRDGSKNLLNELFIAC PGGLMAQGGLDPTESSVPNTKALCGIFS DVAATAENRQTFMQSAIQFLRKYNFDG LDIDWEYPGNRGSPADTQQLFTILLKEM YEAFEQESTRSKKPRLMSAAVSAGKGT IETACQIPEMSSSTPSRKEPPRVWNAPWE VPYVYKGNQWIRYDNSKSFTLK/AVLPH SKDKV*TTEFFALLCLSPA HGKFTQAEPK SGGDRASGLLQSTHLYPGHQLAPIITAA PGGGSTGGSGFCTGKSKGLYPVPHSKH AFYNCVDEHTYEEACQEGLVFDTSCSC CNWA
1804	9855	B	2755	143	867	XVVVLLLLQGGSAYKLVCYFTNWSQDR QEPGKFTPENIDPFLCSHLIYSFASIENNK VIKDKSEVMLYQTINSLKTKNPKLKILL SIGGYLFGSKGFHPMVDSSSTRLEFINSII LFLRNHNFDGLDVSWIYPDQKENTHFTV LIHELAEAFQKDFTKSTKERLLLTAGVSA GRQMIDNSYQVEKLAKDLDFINLLSDFD HGSWEKPLITGDNPSLSKGWQDRGPSSY YNCEICCGVLD*
1805	9856	A	2756	2	394	CSAHSTALRVVRNHFYFTITATQVHKGS SSHPCTDRGNEMMASSPQPSAFGIPGWG AR*PAPAPLPHRRGLPGSVTG*WRPVGQ */PSPHTHCKASTKAQPEGPGTPPPGKPS WKELPESHKKSLAPSP
1806	9857	A	2757	499	1592	QPSQFLSAGLNQTPWGTCLHRAELSP STENSSQLDFEDVWNSSYGVDNSFPDG DYDANLAEAAAPCHSCNLLDDSAFFIL NQCSWGILASRTGLFMPFRPFPRWQLCP GWPVLGTAGCGAVAFFQHLWVPVFGP QYGSVTRSSALL*LGATGVWYGSFAAQ ALLLGC HASLGHRLGAGQVQGLTLGL TVGIWGVAAALLTLPVTLASGASGGLCTL IYSTELKALQATHTVACLAIFVLPLGL FGAKGLKEGIGLMGPGLDEISLWAWF IFWWPHGVVGLDFLVRISKRLLSTCL AQQALDLLNLAEALAILHCVGTPLLLA

						LFCHQATRLLPSLPLPEGWFFHLDLTGSKS
1807	9858	A	2758	1541	1830	KRFLHLHQHTSGKGSRGFHLCCCGFSS KSP/GS*PGAGGASSSSQSKSPGPRPARV RRRLWVRAPPATSQEEASAGRRVRPPSS VHVNIPPPSVRPA
1808	9859	B	2759	4	1698	MGDFNTPLSTLDRSMRQKVNKDIQELNS ALHHMDLIDIYRTLHPKSTEYTFFSAPQR TYSKIDHIVGSKALLSKCKRTEITNCLSD HSAIKLELRIKKLTQNHSTWKLNNWLL NDYWVHNEMKAEIKMFFETNEIKDDTY QNLWDTFKATLNQEEVESLNRPTGSEIQ AMINSLGTKKLQDQDTSQPSSTRDDMIV YLENPIVSAQNLLKLISNFSKVSQYKINV QKSQAFLYTNNRQTESQIMSKLPFTIASK IIKYLGVLTRDVKDPFKENYKPLLNEIK EDTNKWKNIPCSWIGRINIMKMAILPKVI YRFNAIPIKLPMTFFTELEKSTLKFIWNQ KRACIARSILSQRNKAGGITLPDFKLYYK ATVTKTAWYWYQNRDIDQWNITEPSET MPHIYHYLIFEKPDKNKKWKGKDSL FNK WCWENWLATCRKLKLDPFLTPYTKINS RWIKDLNVRPKTINTLEENLGNTIQDIGM GKDFMSKTPKAMATKAKIDKWDLIKLK SFCTAKETTTRVNRQPTWEKIFAIYSSD KGLISRIYKELKQIYKKKTPSTSG*
1809	9860	A	276	842	2432	SLISCSEGSPPKASGPSS*EHCPAKPLPGP TWPLLTGPESGGGGPDVGLR\GQPMN AAPV*SSPCL*N/PGFLTSPGVSSV*MPVL LKEPAFQMAEKAPNGAVCAP/SFPASTS GLWSPAVGVPRSRSLHGSALPWGHAPR Q/SGYPGQSAPAGCGPRPPGGGSRSPGR SVPGSGAWRWPRGRSEACTAPRAWRSA LGESCPAGSGA*AW*WQTAPSPHWGW IGS***VGHLLRAGCAPCWPLGTGCTG LPSRSGHKSLSLSVQVQVWLIRFFPLS* M*KPAACLPS*RERPSCAHWTAGGVMG FLSV*SVIR*SLSHCLAAESSPHPGAPQG TATQIGGGGSRYVQRG*NHRPCRS*PIQR PCGQAGSGGRVASTWCAQ*QTPPGSHSP PTANREINPGAAAAADTRSCWGHKRSW RGWRGLAPWRLGFGSPWNSRDQGPAGI PAARRGGPTFGFLAHGPR*RRTPRDGRE GGKGAGAKPSETLTRSPVWRGKRGS NGFLSWVQILQYFAAGNGIWEMGRGLRI L
1810	9861	B	2760	1	1044	MGRNRSRKDENSKNQASASSPPKDRSSP ATEQSWMENDFDELTEVGFRRLNQEEV ESLNRPIRGSEIEAJINSLPTKKSPGDGFT AEFYRRYKEELVPFLKLKLFQSYKEVILP NSFYEASHILIPKGRDITTKKENFRPISLM NINAKILNKILANQIPQHIKLNHEDQVG FIPGMQALFHIQESINVIHHINRTKDKNHI IISIDAEKAFDKIQRFMLKTLNKLDDMI VYLENPIVSAQNLLKLISNFSKVSQYKINV VQKSQAFLYTNNRQTESQIMSELPFTIAT KRIKYLGIELTRDVKDLFKENYKPLLNQI KEDTNKWKNIPCSWIGRINIVKRATLPK*

1811	9862	A	2761	1331	2175	TEPKTKTT*LSQ*MQKRPLTKFNNPSC*K LSIN/IVLEVLARAIQEKEIKGIQLGKEE VKLSLFADDMIVYLENPIISAQNLLKLISN FSKVSGYKINVQKSQAFLYTNNRQTESQ IMSELPFTIASKRIKYLGIQLTRDVKDLFK ENYKPLLNEIKEDTNKWKNIPCSWIGRIN IVKMAILPKVIYRFNAIPIKLPMTFFTELE KTTLKFIWNQKRARITKSILSQKNKAGGI TLPDLKLYYKAIVTKTAWYCYQNRDID QWNRTEP*EIMLHIYNYLIF
1812	9863	B	2762	1	2898	MRQKVNKDTQELNSALHQEDLIDIYRTL HPKSTEYTFSSAPHHTYSKTDHIVGSKAL LSKCKRTEIITNCLSDHSAIKLELTIKKLT QNHSTTWKLNLLNDYWVNNEMKAEI KMFFETNKNKDDTYQNLWDTFKAVCKG KFIALNAHKRKQERSKIDTLTAQLKELE KQEQTHSKASRRQEITKIRAEKETETQK TLQKINESRSWFFERINKIDRPLARLTEK KRKKNQIDAINKDKGDIITDPTEIQTTI
1813	9864	A	2763	3	668	
1814	9865	B	2764	64	1242	MINS LGTKKLQDQTD SQPSSTRDDMIVY LENPIVSAQNLLKLISNFSKVSGYKINVQ KSQAFLYTNNRQTESQIMSKLPFTIASKII KYLGVQLTRDVKDPPFKENYKPLLNEIKE DTNKWKNIPCSWIGRINIMKMAILPKVIY RFNAIPIKLPMTFFTELEKSTLKFIVNQK RACIARSILSQRNKAGGITLPDFKLYYKA TVTKTAWYWYQNRDIDQWNITEPSETM PHIYHYLIFEKPDKNKKWGKDSL FNKWC WENWLATCRKLKLDPFLTPYTKINSRWI KDLNVRPKTINTLEENLGNTIQDIGMGK DFMSKTPKAMATKAKIDKWDLIKLSF CTAKETTTTRVNRQPTWEKIFAIYSSDKG LISRIYKELKQIYKKKTPSTSG*
1815	9866	B	2765	287	898	MNINAKILNKILANQIPQHKKLNHEDQV GFIPGMQALFHIQESINVIHHNRTKDKN HIIISIDA EKA FDKIQRFMLKTLNKLDD MIVYLENPIVSAQNLLKLISNFSKVSGYK INVQKSQAFLYTNNRQTESQIMSELPFTI ATKRIKYLGIELTRDVKDLFKENYKPLL NQIKEDTNKWKNIPCSWIGRINIVKRATL PK*
1816	9867	B	2766	1	1443	MKLPEEASGSNICCYAIFAVLQPLLVIPK ETVSGVDLQQTPTDLQLSDLTPGRKTNK QKGIASPSTKRTSTPKPHLQANAQRFC HQACVTRVPKGSTKHGKEQLVPATAKT CQIVKNINAMKKLHQLTEIQITIREYHKH LYANKLKNLEEMDKFLDTYTLPRLKQEE VESLNRPIMGSEIEAIINSLPTKKSPGPDG FTAKFYERYKEELVSFLLKLFQSIEKEGIL PNSFYEASIIIPKPGRDTTKENFRPISLK NIDAKILNKILANRIRQPIEKLIHHDQVGF IPEMKGWFKKCKSINVIHHINQTNCKNH MIISIDA EKA FDKTQQPFMLKTLNKLGTI RQKKEIKGIQLGKEEVKLSLFADDMIVY LENSIVSAQNLLKLISNFSKVSRYKINLQ KSQAFLYTNNRHMESQITSELPFTIDTKR IKYLGIQFTRDVKDLFKENYKLLLNEIKE DTNKWKNIPCSWIEESIS*
1817	9868	A	2767	1	966	
1818	9869	A	2768	1	216	
1819	9870	A	2769	3	2074	
1820	9871	A	277	721	1027	

1821	9872	A	2770	1	1632	MHCILPTPSGSGSFPVYTSQSQPKTPGAF SGTLSVREPLSPEPDVLLPGSAKCAALC WVSVLDAASPVTWPVSRSPWECRCV PSPPVREAPVSPPFQCAPPYTDCLSPYL YEYTVCPSPCARVPIPSSTHPWEYKVPPP HAERLCPVSEDPCLCNWKTRAAGARES SLVPCPYAARYPPSPRVAWSSHFSYRG LSPSLGPNKPGNPRGPSESPAAAAASRPRA AAASAPPPGAARLPASPTPRLARDRGVS
1822	9873	A	2771	842	2353	TEPKTKTT*LSQ*MQKRPLTKFNNPSC*K LSIN/IVLEVLARAIQEKEIKGIQLGKEE VKLSLFADDMIVYLENPIISAQNLKLLISN FSKVSGYKINVQKSQAFLYTNNRQTESQ IMSELPFTIASKRIKYLGIQLTRDVKDLF KENYKLPLIKEIREDTNKWKNIPCSWIG RMNIMKMAILPKVIYRFNAILIKLPLTSFT KLEKTTLKFIWNQKRARIAKSILSQKNK AGGITLPDFKLYYKAIVTKTAWYCYQN RDIDQWNRTEP*EIMLHIYNYLIFDKPEK NKQWKGDSL FNKWCWENWLTICRKLK LDPFLT SYTKINSRWIKDLNVRPKTIKTP EENLGNTIQDIGMGKDFMTKTPKAMAT KAKIDK WDLIKLSFCTAQETTIRVNRQP TEWEKISAIYSSDKGLISRIYKELKQIYKT KTNNPIKKWAKDMNRHFSKEDIYAAKR HMKKCSSSLAIREMQIKTTMRYHLTPVR MAIL/RIKSGNNRCWRGCGEI
1823	9874	A	2776	3	2077	
1824	9875	A	2777	3	1038	TAEGTWIAVRRRLRLEGTGGEMSRVPAFL SAAEVEEHLRSSLLIPPLETALANFSSGP EGGVVMQPVRTVVPVTKHRGYLGVMPA YSAAEDALTTKLVTLLRGPRHHLRSSLP TRVIVVTLLSPAMGTLLAVMDGKCS*IA KRTAAVSCHLPSPFLKPPSSEVLCILGAG VQAYSHYEIFTEQFSFKEVRIWNRTKEN AEKFADTVQGEVRVCSSVQEA VAGADV IITVTLATPEILFGEWVKPGAHINAVGA SRPDWRELDDELMKEAVLYVDSQEAAAL KESGDVLLSGAEIFA*AGEK*FKGVKPS /YCEKTPRCSKSLGMAVEDTVAAQTHP MIPWSSGK
1825	9876	A	2778	2	2037	
1826	9877	A	2779	3	194	TFFFQVKPDGTYVKPLASNKLTYGATMV FVRSFLVGEAARALS KACTIAIRYSVR HQSEIKPG
1827	9878	A	278	615	2182	PQVIRPPWPPKVLGLQGLLTRDVAIEFS QEEWKCLDPAQRTLYRDVMLENYRNLV SLDTSSKMMKMFSSGTGQGNTEVVHTG TLQIHASHHIGDTCFQIEKDIHDFVFQW QENETNGHEALMTK/YQKVDECTERHD QRHAGNKPLKMSLDQAFIRICLKCTYFT PKGKLVIKLRRLLSTMLS/HVSASQRISCRP KTRISNKYRNNFLQSSLLTQKREVHTRE KSFQRNESGKA FNGSSLLKKHQIHLGD KQYKCDVCGKDFHQKRYLACHRCHTG ENPYTCNECGKTFSHNSALLVHKAIHTG EKPYPKNECGKVFNQQSNLARHHRVHT GEKPYKCECDKVFSRKS TLERHRRHT GEKPYKCKVCDKAFRIRDSHLAQHIVH TGEKPYKNECGKTFVQIHLVMHKVLA HTGEKRYKNECGKVFNHKS NLACHP* TSIPGREFTTRVMECGQG FNRRKSNLER HHRLHTGKKS*KC/EICKVFRQQSNLAC HHRLYTGEKPYKCECDKSFQFQITP
1828	9879	A	2780	1	903	
1829	9880	A	2781	133	402	
1830	9881	A	2782	2	242	

1831	9882	A	2783	26	2229	RFRAGAADLDCHCHLGRCLLRCLVVA MNPDLRRERDSASFNPPELLTHTLDGSPE KTRRRREIENMILNDPDFQHEDLNFLTR SQRYEVAVRKSAIMVKKMREFGIADPDE IMWFKNFVHRGRPEPLDLHLGMFLPTLL HQATAEQQERFFMPAWNLEIGHFIAQ TEMGHHGTHLSRLSETTATYDPETQEFIL NSPTVTSIKWWPGGLGKTSNHAIVLAQL ITKGKCYGLHAFIVPIREIGTHKPLPGITV GDIGPKFGYDEIDNGYLKMDNHRIPREN MLMKYAQVKPDGTYYKPLSNKLTGT MVFVRSFLVGEAARALSKACTIGILYSA VRHHSEIKPGEPEPLILDFQTQQYKLFPL LATAYAFQFVGAYMKETYHRINEGIGQG DSELPELHALTAGLKAFSTWTANTGIE ACRMACGGHGYSHCSGLPNIVNFTPSC TFEGENTVMMLQTARFLMKSYDQVHSG KLVCGMVSYLNDLPSQRIQPQQVAVWP TMVDINSPESLTEAYKLRAARLVEIAAK NLQKEVIHRKSKEVAWNLTSDVLRVAS EAHCHYVVVKLFSEKLLKIQDKAIQAVL KE/SLCLLYSLYGVSQWAGDFLQGSIMT GPQITPSNPAV*RELLTLIRSDAVALVDA FDFQDVTLGSVLGRYDGNVYENLFEW AKNSPLEPKAEVHGIFTRHLEVHCQSQ LEVFTDRDKFSGFQKAPVWQLQILWESF SNSNRL
1832	9883	A	2784	61	241	
1833	9884	A	2785	60	341	
1834	9885	A	2786	70	428	IGGPQGFSPTPSLKPRPRIFKTPPIRGNWG PRPPGVSPQFQGGDTKFNLEILFVVL TFSV*AQSGDPAAPRSGP/RPGGRGERE G*NEKSPVLPQCWGGWRHPPSAALLW ALIW
1835	9886	A	2787	38	243	TPSTIDKSLTSLIKKKKA*INNFRDKKGN IAKDIPEM*KIIREYYENIHANTFENLGD DKNKIDQN
1836	9887	A	2788	2	114	
1837	9888	C	2789	50	214	
1838	9889	A	279	403	933	QQRWQQGWWQAWGGQVPVQEVGFWF LLSWLLSRLGVPAAQGPARGVDP RGARGGCSASAAPPARASPGRPCCWNG SRPPAQHRRTPATRVGEAGQGEVRGVR RLPAPLLQAVQPRLSDRSYPAAPARPTA TSP/APPSPAPKAPVIGALS*GTADPGSD SYPPSRSHAPRP
1839	9890	A	2790	1	624	
1840	9891	A	2791	2	851	
1841	9892	A	2792	1	1116	
1842	9893	A	2793	53	1408	HRCCLWTFQCLSLGITFLIKEGKEGKL EPAREGPYLVLTTTETAVLLSITPTTNS NPTLERFCGLGAEVTGKDPMGFFKVLRO SLDADEGTAVDIQSFRPQKDFGRRRTLE ECHVTGKGGTGTMSNRVVCREASHAG SWYTASGPQLNAQLEGWLSQVQSTKRP ARAILAPHAGYTYCGSCAAHAYKQVDPS ITRRIFILGSPSHHVPLSRCALSSVDIYRTP YDLRIDQKIYGELWKTGMFERMSLQDE DERSIEMHLPYTAKAMESHKDEFTIPLL VGALSESKEQEFGLFSKYLA DPSNLV VSSDFCHWGQRFYYSYDESQGEIY*SI EHLDKMGMSIIEQLDPVSFSNYLKKYHN TICGRHPIGVLLNAITELQKNGMNMSFS FLNYAQSSQCRNWQDSSVSYAAWEHS RATEALNPQGCHLPSSYSVRGSPA

1843	9894	A	2794	53	699	SLPSLTPGSRQPPAGRLLNTEHHINEHIL MYSLDLNSSSQMPSIKAQTSDEIFEVD GEMPNHLLPIKAHVEDLGWMDDEGDDD PVPPLPNVNAILKKVIQWCT/HPHKDD PPPPEDDEEQRKSVDDIPVWDQGIPGK FDQGTLF*NSFLGLQTYFRTSKGLLDVTC KTVCCYDQKGKLP*EIRKPFPSKMTFT EEEEAQVRKENQWCEEK
1844	9895	A	2795	162	522	WVRRGTISPARQRQDGVGAAPANYAKV LEWQLAPSPRHKCQQRPGTHLGCDSIGP LSPVGLPGLKG*PDNSSEGCPS/QALPVP SSPGHPGSGGPKGQARSLLNCRGCPINW QHRCCRKI
1845	9896	A	2796	2	1214	QPFQSGCVIALGRKMFSSVAHLARAN PFNTPHLQLVHDGLDLRSSSPGPTGKP RRPARNLAAAAVEEQYSCDYGSGRFFIL CGLGGIISCGTHTALVPLDLVKCRMK VDPQKYKGWFGFVTLKEDGVIRGLA KGLAPTFLOYSMQGLCKFGFYEVFKVL YSNMLGEENTYLWRTSLYLAASASAEFF ADIALAPMEAACKVRJQTQPIGYANT*EGI SFPKCIKEKGLKAFYKGVALLWMRQIT YTMN*SSPCLERTV*SHCTSLGVPKPSE VCSKPEQTGCNHLVAGYUAVFCAIVSH PC*FVWYLVNLKE*SVAVSLLVFSVTL FKGVWKGLFARINMIGTLTALQWFIYY SVKGYFRT/LPRPPPPRDGQSLNNKFGL TPVVRSKQIVD
1846	9897	A	2797	276	728	CFGFVFPRSWPYGPLSTGDVPKLGPPN* AMGGFRPGKQVSLPGFAGGHACSPAS LPSGPGPAPPRACLSPRGGKSLGAPGG FPPGDSHGAPCSRVTVSPGNDLKPGHS PRTLQRGGSLPGRWVWSCGVVCPVW WPVLSASISGW
1847	9898	A	2798	451	1030	VPEALSPFEMEGPQFPTMCCCSAPPAMP FPTT*QPSEAAAGQGVPGPHRL*GGLAP AGRS*APAGAFWGQGAQRGEPAYSSK GGAAASTQRVL*HRRGHRGDASRGCP GDQNLQ*KLCSSRAEGGAVSQPGWPAL PHAAGEPLASALPGLHAAQAPAVVSG PTTIRSCSGNSGKIFPSSCLDSCFPSS
1848	9899	A	2799	1	933	
1849	9900	A	28	1230	1820	QEYRPSQTPHLALSPERVAPGRRRAAGRL APEARAPRGSP/LPPHRVSEKTIRVVVFH PGARKAGGTTPRAPRGDTGGAPGAITY STPLMSLHRARLESSSTGSSFPADSAKPV PLAVVSLDSR*GWESRSSIHA\VTN*AS SSSSSSSSSFSR\IYPRFIEFLHFDIQTG Q/RITSRQHPPR/DLRDALF*LSNRIPL
1850	9901	B	280	73	207	ELGTQLRTCTTSLGLASQVEAHSLVLS HLKTLLWKKISNTKYS*
1851	9902	A	2800	1	1563	MRREGFKFSRSKVQDEMTHKWHKSD LHWVSRIQCTVLGVLNATEMRSLPIES LFLIQCFVVSAGSRNEATDCSGECYSSM RETRGSKECAARFIKVKGVQKQVESY KLYHPYFLANWFSASFVKVGLVEMRG QEEETLGTFAHVLMFQAASSRALVLPPT MQLELQNFNTCSYRKPNMASSMRSLF SDHGKYVESFRRFLNHSTEHQCMQEFM DKKLPGLIGRIGDTKSEIKILASIGGAGAGEI DLQILSKVQAQYPGVCIQH*SCLRPSAG TNWPNYKELVAKTSNLENVKFAWHKE TSSEYQSRMLGEKGAFKSWDFYSI*FKM LYYVKDIPATLKFFHSL/LGTNAKMLIIV CVQSSGWADKLWKKYGSFPPQDDLC QYITSDDLTQMLDNLGLKYECYDLLSTM DISDCFIDGNENGDLLWDFLTETCNFNA TAPPDLRAELGKDLQEPFES/ALRKEG KVLFNNTLSFUVIEGITIQSQYIQLYFE

						QLESLIYFHIKITNSSH
1852	9903	A	2801	1	6750	
1853	9904	A	2802	3	91	KKNIN*EILN*KQMEEPTLYVGNFPIQLT
1854	9905	A	2803	3	7501	
1855	9906	A	2804	3	3223	PPPEAAVVAFEWLKTSTLTGLHPQLPLSL PQPECALPYLVRAFSRGDYMGRIQEVG WVTAGLVIWAGTCYIYKFTKGRAQSV RTLARNGSTVKMETVVGVSQTLAINEA EIKTKPQVEIGAETGARS GPRAEVETKAT AIAIHRANSQAKAMVGAEPETQSESKVV AGTLVMTEAVTLTEVKAKAREVAMKEA VTQTD AEAGKIVKKEAVTQTKAKAWAL VAKTEAKREAMTQTKAETHILAEKETEI NRVMV
1856	9907	A	2805	1	374	NYFLSLRFDWHSSKS*GHPTCVHCF*/TK NE/CASCHCGAGLLGFLGSGEGASHPC PSCLPLEYRSLHCSLGHCGECMPGASGW GPWTGPGHCPNLCQDKGSKRISWRVGR NGWGRPSFDNAPVAL
1857	9908	A	2806	162	789	AGQNGVSGSAERCLSCLLIPLALWSIENI LLYIPNGHTFYASSNKLTNYVWYSERI*L SGIMMLIVTTVLLVLENNNNYKC/CQSE NCSKKYVTLISIIFSSLGIAFSGYCLVISA LGSCP*AIC/LAPLMGWGVCF*RALLGRF LTDSSIWDSVPGNLAHVVEWNILFSILIT LSGVQVHICLIRVVMQLSKILCGSYSVIF QPGII
1858	9909	A	2807	1	3282	
1859	9910	A	2808	136	447	
1860	9911	A	2809	3	3593	SSDPRPSSFVLVWVGLWSMVWRVPPFL LPILFLASHVGA AVDLTLLANLRLTDPQR FFLTCSVGEAGAGRGSDAWGPPLLEKD DRIVRTPPGPPLRLARNGSHQVTLRGFSK PSDLVGVFSCVGGAGARRTRVIYVHNSP GAHLLPDKVTHTVNKGDTAVLSARVHK EKQTDVIWKSNGSYFYTLDWHEAQDGR FLLQLPNVQPPSSGIYSATYLEASPLGSA FFRLIVRGCGAGR WGP GCTKECPGCLHG GVC
1861	9912	A	281	276	565	WTSSVSTGQSDQA/GPAPALIQMRPGC GPSPVPGGWLE*RDGQAGMGAAAAPA WVLLCIPAGQGPLPGPRLPFHIPILKFCYC GILVEKKEPRGCF
1862	9913	B	2810	85	283	MEKTELIRSAWRVISSIEQKTDTSDDKKL QLIKDYREKVESELRSICTTVLELLDKYLI ANATNPEX*

1863	9914	A	2811	1	932	KAKSRSEVGLASRPRRRGSSRGSSRCG SALALALLALRPGPGPAPAMEKTELI QKAKLAEQAES/RYDDMATCMKAVTEQ GA/QSLNEERNLLSVAYKNVVGRRS A\WRVSKHPSRKTDTSDK\KLQLIKDYR EKVD\SE\LSNCTTVLGICLDKYF/ILANG NLIPESK\VFYL\KMKG*FTFRYLCLEVA CC\DRK\QITIDNSQGA\YQEA\DISKK\E MQPT\HPIRLGALLTFSVFYYE\LN\NPE ACLHAWLKTA*WRAIA*LDTLNEDSY KDSTLIMQLLRDNLP\WTS\SDSAGEECD AAEGAEN
1864	9915	A	2812	199	214	PPSPLNSSTCCLAKTDEK*CKEKGSHLLH
1865	9916	A	2813	1	2176	QGPKLFMDAGIEFSQDEWKCLDPAQRT LYRDVMLENYRNLVSLGICLPDLSVTSM IEQKRDPWTLQSEEKIANPDGREGICKGV NTERSSKLGSNAGNKPCKNQLGFTFQLH LSDLQLFQAERKISGCKHFEKPVSDNSSV SPLEKISSSVKSHLLNKYRNNFDHAPLLP QEOKAHIREKAYKCNEHGQVFRASASLT NQVIHNADNPYKCSECGKVFSCKSLVI HRRMHTGEKPYKCHECGKLFSSNSNLSQ HQRIHTGEKPYKCHECDKVFRSSSKLAQ HQRIHTGEKPYKCHECDKVFNQIAHLVR HQKIHTGEKPYSCNCKGKVFSRHSYLA HQT\VTHTGEKPYKCEECGKAFSVRSSLIT HQLIHTGRKPYKCKECDKVFGKCF\TS HQRIHTRERPYGCSCGKIFSQKSDLA*R HRKTH\TDEKPYNGNCKGTAFREFSD\TA HFLIHSGEKPYECKECKGVFRYKSS\TSH HRIHTGEKPYQM/CNRCGKVFSRSSNLV CHQKIHTGEKPYKCNQCGKVFNQASYL TRHQIHTGERPYRCSKCGKAFRGCSGLT AHLAIHTEKKSHECKECKGIFTQKSSLTN HHRIHIGEPYKCTLCS*GLSVTILTLHSF RGFHHEGPYKLC/DGKTIIMSSSINQH* VHTKW\KSYK*NVCDTGFIKACQITGHHH ITVEDESTQMNCVYLGYYSR\TIAIEHDRI YTRSNSVSGSLILIYDIA
1866	9917	A	2816	26	736	EPIPVTPDHLVMTMTHIVANLLSCQQRPR LPNYEMLKEEQEVAKLGAPOKPLPEC PPVIHNRNXTSWPDHVR\VPVQ\HPLHE HLLRLGFIRFA\YSVKSLRDRK\MVGEVN RGPKA*CLHRQSA*KIWGPDFG\HLHEPI LAHQSSPPKFVVVPGPANDREAS\LRPG ALPVTCPRT\ASSIPRAPRGQEV\PLTCI PLTPPSIPRPVPTAES\CSPLSSHAF\QWH SIKCICFW
1867	9918	A	2817	748	1637	DIMESGFTSKDTYLSHFNPRDYLEKYYK FGSR\HSAESQILKHL\AKNLFK\VFCLDG VEGETCLNDIGFWAPLILSSSSSCFVESF* GRIVRSLDYFRTQEPGRELGRK\WLEGKE ARGLFDWVPPMVTMCLNLERETE\VKG PRRRRKKL\QAVKARCLKM*M*TQKPS HLGAVPLPPG*TAVPQAHLCLGCP\PCPR PPQPTCKGASGTLGQPYLKPRG\PSLVIM DAAQE\QPTYMIGE\QKFS\SLPLGREAVK AAVKEAGYTIEWFEVISQSYSTMAN\N EGLFSLVARKLSRPL

1868	9919	A	2818	1	1538	MENPIVKSLAKARERLEDSKLEAVSDNN LELVNEILEDITPLINVDENVAELVGILKE PHFQSLLEAHDIVASKCYDSPSPSPMNN SSINNQLLPVDAIRILGIHKRAGEPLGVTF RVENNDLVIARILHGGMIDRQGLLHVGD IIEVNGHEVGNNPKELQELLKNISGSVT LKILPSYRDTITPQQVFVKCHFDYNPYND NLIPCKEAGLKFSKGEILQIVNREDPNW WQASHVKEGGSAGLIPSQFLEEKRAKAFV RRDWDNSGPFCTISSKKKKKMMYLT RNAEFDREHEIQIYEEVAKMPPFQRKTLV LIGAQGVGRSLKNRFIVLNPTFRGTTVP FTSRKPREDEKDGQAYKFVSRSEMEADI KAGKYLEHGEYEGNLYGTKIDSILEVVQ TGRTCILDVNPQALKVLRITSEFMPYVFI AAPELETLRAMHKAVVDAGITTKLLTDS DLKKTVDDESARIQRAYNHFYFDLIINDNL DKAFEKLQTAIEKLMEPQWVPISWVY
1869	9920	A	2819	1	1749	EFVLNYPEPRVCRWGCSAAPVAEGEQR RGATGSGSGGAEEAEEVRAAMQOVLEN LTELPSSTGAEIDILFLKGIMENPIVKSL AKAHERLEDSKLEAVSDNNLELVNEILE DITPLINVDENVAELVGILKEPHFQSLLE AHDIVASKCYDSPSPSPMNNSSINNQLL PVDAIRILGIHKRAGEPLGVTFRVENNDL VIARILHGGMIDRQGLLHVGDIIKEVNGH EVGNNPKELQELLKNISGSVTLKILPSYR DTITPQQVFVKCHFDYNPYNDNLIPCKE AGLKFSKGEILQIVNREDPNWWQASHV KEGGSAGLIPSQFLEEKRAKAFVRRDWDN SGDELDTIKFDRHEIQIYEEVAKMPPFQR KTLVLIGAQGVGRSLKNRFIVLNPTFRG TTVPFTSRKPREDEKDGQAYKFVSRSEM KADIRAGKYLEHGEYEGNLYGTKIDSIL EVVQTGRTCILDVNPQALKVLRITSEFMP YVVFIAAPELETLRAMHKAVVDAGIHH PRL*PNSDLKKTVDDESARIQRAYNHFYD LDPSINDNPRPKPFELQTAIEKPENGPP QWVPQSAWVYLMIQ
1870	9921	A	282	1466	2353	RNVHLNLLIHFIYFKINVFHIDFPLGGEK NSGVLGFQAVQKQPRGSFFLPRIPQ*QN LRIGI*KGRRGPGSGPWPAGDTQQHPSK GKGLPPLPACPSL**QGRRCSGPGGRL GS*GCKHPECQWSQRGVRPLSVPLFQP PGTGAGPTSWASASGSGAGACQPGS/PL GSVHTGSPSQAKSPSRVK*QECQHPTH VSSPVSRRPGFPLPGGNRAGPAAPSPP RDTAAPPPrPGPPSGSLAQDAPGRSLP PPRTRRPAQAQSPRPSASESEAAARRGPVR RSRTGREEKSG
1871	9922	A	2820	14	230	FATLYPLKIFIPKAFNPWREVGPLCPPPK /CKGPSKSPGW/CLNRPPIGKKLIPCKPR LTWAPPRIL*NGPP
1872	9923	A	2821	170	303	RPLRGTPC*CAAWASSWWGCCSACCSH CCLLGPCWHSGPCSA*WAFWCSSG
1873	9924	A	2822	208	547	AAPGAMGPWPDRLCGSALPSCRLPCYSS ASVSLRCAAENTFTQAGPCCWAWPHRA HQDFPLQIPFRHLEAPRCSPPLSAWPPRH LLPAGDPDLQEQPPGIRGAP*RPLRGTPC CGS\CGVAAGVRGCGPVWL*HPEPADSH TATAEPRI*AAPGAMGPWPDRLCGSALP SCRLPCYSSASVSLRCAAENTFTQAGPC CWA WPHRAHQDFPLQIPFRHLEAPRCSP PLSAWPPRHLLPAGDPDLQEQPPGIRGAP LSLRRRLLL
1874	9925	C	2823	48	173	MVRKRMEMKMRKLSQLRASGQLKMM RMXMSIPRRRPRGIX*
1875	9926	A	2824	183	423	

1876	9927	A	2825	147	588	TLAFLFLIPICIGSPACPTMSDAA\VDTSSEIT TKD\LEKEKEVVVEEAENG/REDRPLCTG NAENE\ENGVEQEA*QLR*DEE/EREGRLG REGGREGRKEG*LVEEEDGRLKIEEAES ATGKRATE\DEDDDDCRYQSRRPDEDD LDSKKAKS
1877	9928	A	2826	1	77	SGRPFFFFFFFFFFFF*CKGFLIGYM
1878	9929	C	2827	175	351	MKLIQLSCQPFNSRHHVLKKKPLTFMILS HFQASLSSIFGFCSSLFRQSSFFSNILFF*
1879	9930	A	2828	56	380	KYLVDQHAGSPPVKNILAEAVQNIVQIL H*EIQKSVNHRVYML*KLDTDSL**FIIQLQ \EPTILGIKVDVYKHEYKDKDGHSDFSNY SSHQVFFLLFLIFNKDNMAIN
1880	9931	A	2829	3	129	
1881	9932	A	283	134	385	CQIMDGMLAIQAWPTPQQVASNGTGLN PNAKVWQEIAPGNTDATPVTHGTESSW HEIAATSGAHPEGNAEPQKIYVKNMK*C I
1882	9933	A	2830	472	756	SSADSKCTLTIGKPAKSRVQLCHKEETFP NQTNAVRTCVD*CLMSPTLLGTSIF*SQ MIIRVVPICMPNIFLIISC*VLCIRKPVSEL PHLLGF
1883	9934	A	2831	1	170	
1884	9935	A	2832	1243	5595	
1885	9936	B	2833	2177	3174	MGKTTPMIQSRPSFDTWELQVPPSTCGD YNSSFIKELRASQSNVIKPPGPVKLKESV VENHAVLSYAVEEEHAYLGPTVKPDDK AKTLSYEPLSSATVSTGSLLSYENTDLSL TDPEFSEHMDDSKQESTTSKEEETNISS IVPSTQDIYQRQNSSDVHKSLLPAVDETT CGHTHFQQMIDKALYQSGKPETGHGIME EPELTLISTDTSIAEMDFANLTLEEKSEN EAKCFQQSKTRLKRLKRVKHATFLPLA TEASDYPAVSELSIEKPRTASTETPRRLTP VPGSLQEAFIGRKKSFMERSHQKQKEIR NKIHVSENSQIKTVKEKPSISSIL*
1886	9937	A	2834	2268	2547	KYLVDQHAGSPPGKSLCCLEKSQRMMM ISQNLDVVLRV*TADDAN*EKCVPILANL FFQVSNLLH*VLVYHLLKVCVTTCSEFIH CRQQRFMNV
1887	9938	A	2835	137	716	TTTMSKKAKTKTKKRPQRATSNVFA MFDQ\SIQGVQRGPFNMIDQNRDGFHS DK/EKVLHDMLA\SLGKNPH*WHYLD MMNEAPGPIQFSPCFL\TLFG*GSLNGHQ IP*RCSFRKRLAFALDEEATGHFPREDYL /REELLTPWGDVRYQIEEVG*TCTGEAP I*QKGGNSNYHRSFTRHPNWKAPKAQR
1888	9939	A	2836	2	437	LVIIESDLERAEEAELSEGKSDSWKNN* E*WIRP*KH*WLQRISKCAELEELKTVT NNLKSLEAQAEKYSQKEDRYEEIKVLS DKLKEAETRAEFAERSVTKLEKSIDDLE DKFLCFTSPKTPSSSWMSHLSELICLFFSS
1889	9940	A	2837	1	834	GSRVRRAAAGLSHCSPPARLPSGAMAGS SSLEAARRKIRSLQEQAADAEERAGTLQ RELDHERKLRETAEADVASLNRRIQAW FEEFVFVPERLATAFQKLAEAEKAA DESERGMKVIESRAQKDEEKMEIQEIQL KEAKHIAEDADRYEEVARKLVIIESDL ERAEEAELSEGQVRQLEEQRLIMSDL KALMAAEDKYSQKEDRYEEIKVLSK LKEAETRAEFAERSVTKLEKSIDDLEEKV AHAKEENLSMHQMLDQTLLELNNM

1890	9941	A	2838	9	1108	PDRATRPRPRARPADPALVLGPLAAVTM GAGKKKMRMLKLDKENALDRAEQAEA DKKAAEDRSKQLEDELVSQKKLKGTD R*TGQIL*RLSKMPKEETWNWQEKKATD AEADIVASLNRRIQLVEEELDRAQERLA TALQKLEEAKEAADESERGMKVIESRA QKDEEKMEIQEPT*KRAKHIAEDADRK\
1891	9942	A	2839	3	268	YEEVARKLVIIESDLEPCRGSGAELSEGK CAEA*KEEFENL*PNNFEVHLEGSRLRK YSQKERPDMEEEIKGPFDPKA*RRLETR AWSFAERSVT*NLEKSIDDLEDRAVTL QETEVQSHQRRSWDHALNGYDFHISFFA SLLPRLPRRSWMSHLSELFHLSYSPADPG SLS
1892	9943	A	284	305	1129	DICKEYEVMYSSSCETTRNTTGIEESTDG MILRPEDLSYQIYDVSGESNSAVSTEDLK ECLKKQLEFCFSREKLSKDLYLISQRDSD QFIPIWTAANMEEIKKLTDPDLILEALRS SPMVQVDEKGEKVRPTHKRCIVILREIPE TPIEEVKGLFKSEYCPKVISCEFAHNSD WYITFQSDTDAQAFKYLKKEVVKQFKA RPILAGIKAINFFC*EWSSNNGILESIVHP I*TQAQYASPVFMQPVYNPHQQYSVYSI VPQSWVSKSYTLL
1893	9944	A	2840	500	682	
1894	9945	A	2841	1617	2086	GLAASSRKHQMVDADAVGGPGGPGM AGCDGLPGGFGSDIRPRLWLWGPRLW SS*RTWNILASVPKKLLLM/DCYALARD RTATLGVTFDAISKTASNWIPDLWKETVF TKFPYQEFTDHL/VKTHTRVSKQKTQVP AVATTAARQTMEGQAPVEYI
1895	9946	A	2842	55	665	AMAEDHGLSNGDGPVEVTQGLELLVSA AAQDIVLLDGIQGLFLTQFDNIWVWDH FLGKLPHRVFKGGGEKQHLAVPGQHPL DADALILVALSGYHDISLIQNKHLDLGI NELDLEHQSSSTVPGVPMTICSLIFWPLSN LLPRTA*ASFSSG*NLPICSITFPV*SASSY VGERHRHWGYLSDGSTRLSMAKTKAA VLPVPD
1896	9947	A	2843	43	548	
1897	9948	A	2844	1	876	
1898	9949	A	2845	222	482	
1899	9950	A	2846	3	218	SLFQLKTTKTQSRVMGAIYDSSWFQEDR QAAERFTDRSTHLRLRNAEAAA*TKPAQ GPGSIPILPATPSSL
1900	9951	A	2847	322	452	LCCSI*IYLN/NLLIC*QSFSVLK*DFRVD* KKKNPRMSHRLNI
1901	9952	A	2848	3578	5288	TESREHFSPWYSVTAARRPQVASKAEEN LLMVLGTDMSDRRAVIFADTLTLLFEG IARIVETHQPIVETYYGPGRLYTLIKYLQ VECDRQVEKVVDKFIKQRDYHQQFRHV QNNLMRNSTTEKIEPRELDPILTEVTLMN ARSELYLRLFKKRISDSEVGDMSVS*E VKQEHQKCLDKLLN*LAFLSYHGRELI GLYVTMEEYFMRETVNKAVALDITYEKG QLTSSMVDVDFYIVKKCIGRALSSSIDC LCAMINLATTELESDFRDVLCNKLRMGF PATTFDIQRGVTSVNMHSSLQQCKF DTKGISTDEAKMSFLVTLNNVEVCSENI STLKKTLESDCTKLSQGIGGEQAQAKF DSCLSDLA AVSNKFRDLLQEGLTELNST AIKPQVQAWINSFFSVFHNIEEEFNDE ANDPWVQQFILNLEQQMAEFKASLSPVI YDSLTLGMLTSLVAIVELEKVVVKSTFNR LGGLQFDKELRSLNAYLTTVTWTIRDK FARLSQMATILANLERVTEILDYWGPN GPLTWRLTPAEVRQVLALRIDFRSEDIK

						KAALVS
1902	9953	A	2849	233	801	VVTLTGSNLYFYCSLFIFSVLPDQDVS LV *ICYLSLPLDIVCFCNVKIQFFFLSLESYY *FLTIFPHCFYFLKTPFKHRELFILVFGL LKIFQ/LC*FFYLILLRIFYFINFCFLDLF LFWIFIWYFVIFACSWFIGVSLKFLLVPL/ CSFFLRCRHSPLF*GAS*TDLYILGCIPFP* VCLLWEFCGGL
1903	9954	A	285	1053	1403	TFTQDSAGSLVVHSPMTSIWKTAESVDQ GHFPIILILFVYLLFETGSHSVTHATMQW CDHSSLQPQTP/SGSGDPPTLAC*VPGIIG MCHHTWLIFTPAETGSHHVPRLVSNP LA
1904	9955	A	2850	170	494	
1905	9956	A	2851	70	1474	RESGTWQPGKAGTQTGAKFWEVISDEH GIDPTGTYHGSDLQLERINVYYNEATG GKYVPRAVLVDLEPGTMDSVRSPPFGQI FRPDNFVFGQSGAGNNWAKGHYTEGAE LVDFVLADV*RKEAES*DCLAQGFQLTHS LGGGTGSGMGTLISKIREEYPDRIMNTF SVVSPKVS DTVVEPYNAILSGHQLVEN TDETYCIDNEALYDICKTLKLTTPPF DLNHLVSATMSGVTTCLARFPGQLNADL RKVAVNMVPPFRLHFFMGGFAPTDQA GASQASTRALTVPRSSPKQMFDKAKNM MAACDPRAWAAYLDGLPPCFRGPVPL KEVDEQMLNVQKQKQPAIFVEWIPQQ CEKRAVCDIPHLRGLKNVRPPSFGKQAR PIPGAFSKPHLPKQFHGPCFRRKALPSFIT GEGMDEME FHRPESNKNDLVSEYQV QYQDATAEEVEGEFEGRSLGRKVA
1906	9957	A	2852	284	359	QQEANPSAPLQHVSTSN/CVLTCKGA EGLASCCYCHCLCNECCQGACGPDTHL AHCCRCQHSSKPPGGPRI/ASTQTCYY*C PCRLPGGSRT*CLASCPYHWCWTSPLG SPVVPNKAPP
1907	9958	A	2853	295	478	
1908	9959	A	2854	1	1167	

1909	9960	A	2855	3	1328	SGILGTTTTSPFVGVLVRLVECP LCPGPAP MSVPAFIDISEEDQAAELRAYLKSKGAE ISEENSEGGLHVDLAQIIEACDVCLKEDD KDVESVMNSVIVSLLLILEPDKQAEALIE SLCEKLGPNFREGEPPRLRLQFVKATF STGMD*EILPVKIHVSICSLNKAASCGA AIQYHPQLEPGIKFRKWDFLNWNLTG KKSTPLLKTTFMKALVDCCKSDAASKG MVELLGSYPGGQCFPRARVDAHRICIV RALKDPNAFPFDHLLTLKPRQVFWKGE LI/HIVPF*PNFVSA*MGHMSRFYPD*LR TFH*IPLGPVTMDPGIWPKMRLFLWLG MGQ*ENRNEISFWTTMPARNFRIGADDIV EAFVIDAGKELKMVYCNWSRQKVV VSHSTHRTFGKIQWQQTV/YDTLNAW KQNLNKIVKNSLLSPSGYLKFLCL
1910	9961	A	2856	377	2393	FSLECLGHENR*D*ITIYKITS LGTGKVFN KIQHPFTIKNKK*KTLNKLGEENFLNLK GIYEPMVSIILNGEGLDYFLRSETRQG CLLWPFLEN/VLDSQERAIRQENKIKVI* VGKEEV*LNRMGDDMVVL CIVIQGKI* KIQRHDLLINKFSKVTGYRI/NICRKL VIF HI*YQLNKSQNDVKKTI*FSTMVKLGGL C/RVIPTLWESEAERLLEARRPAWETVRS HLYKNKQTKNNKQTKN/TLDMVTLICRL SYSEAEV*GWLEPQSSKLQ*AITGSLQSS LDRQS*TLTQKTKKKRKL TASERVKY QYN*GSRNID/PHLSSN*LENSA*GQFQ WGGKIVFFIK*CLETWISTWQNNGNWDS YLILHIKINSELT*DLNVRANIVSIFKEN/M GVNLSDFELGNDFLNK*/PLKTQATKEEN R*IKIKTICVSKDNIKKAKIQPTE*DNFF*N HVLVKG GICI*NM*RTVTIHKRHIIQFLKI QQGVWN*QFSKGGYTKGPLRHMEKVSQ PSLAIREMQMRSTMRYHLTPLE*IYNQS DNIKCW*GCREIGTLMHCWWYPRDIKT NVYTKTCAQMFLPALFI*AQK*NGP*FLS VLSALTKTWHIHT/MEYYSSQ*KKEMKV LIWPPTTMEKPLEKPYPSEECPRHERPTY YMISIIYMKCPRTGEYI
1911	9962	A	2857	3	445	GEFADSF/SSMGSPVNAQDFCTDLAVSSA NFIPTVTAISTSPDLQWLVPALVSSVAP SQTRAPHFPGVPAPSSGAYS RAGVVKTMTG TGGRASIGRRGKVEQETDQLEDEKSAL QTEIANLLKEKEKLEFILAAHRPACKNPD DLGFPE
1912	9963	A	2858	295	1622	DEMSVAGSELFTAACGTGNSPHLCPEHA RSRRLSPSVLF*DFCTDLAVSSANFIPTVT AISTSPDLQWLVPALVSSVAPSQTRAP HPFGVPAPSAGAYS RAGVVKTMTGGR VQSIWQEGARWEQVRNF*RTLPGNVGAG WEAAPEMQEPSTEDEAT*WGLLAHP*LG ALAPSPFHPNSDSEFSP*EVLS*FLP*VSY RMLSDWALLCSLAEDLILNASHT*SATA GQKWFHSGVPGSREAAAGASSTGVGEWR *WQTLNLLNVGLFL*LF*LSPEEEKRRIRR ERNKMAAAKCRNRRRELTDTLQAGRYS VGCSFLKLKGVGRLEHKGP*VRLCLYA FPLSLCIQETDQLEDEKSALQTEIANLLK EKEKLEFILAAHRPCLARFPDGP GAFPE EMSVASLDLTGGLPEVA/TPESSEAF/TL LLNDPEPKPSVEPVKASA

1913	9964	A	2859	3	1467	PHLQRATEKPRLSRRPRRSERAVTVLLPS SASQRPVVSAPRPLARLCLTATMMFSGF NADYEASSSRCSSASPARD\SLSYHSPA D\SSFFSMGSPVNAQDFCTDLAVSSANFIP TVTAISTSPDLQWLQVPALVS/SLWAPS QTRAPSTFSESPPPTAGAIYSRAGVVKTM TGGRAQSIGVRRGKVEQLS\PEEEEEKRRIR RIERNKMAAAKCRNR\RIELDTLQAI ETDQLED\RKSA\QTEIANLLKEKEKLEF/ LSLAAHR\PA\CKIPLIDLGLPRKEMSVGS VLDLTGGLPEGS\TPE\SEEAFTL\PLLNDPE AQGPQWEPVQGGISRHGS*KDRGPFDDF LFPSIHPGPSGFLRTARSVPDMGPILGPF YGRQIRGAFSHSGSLGMGAHGHRGWEP LCTPVVTCTPSCNCLHVFPFHLPRG*LL POLCSCPPQGGQQQ*AFL*LAQLTHAAG PVRGQGRGSRHPQVPLPELVHYREEKH IFPRGFL
1914	9965	A	286	259	506	PGYRRGHGGAAGRQEPAAARHNPAVRE DADGGD\RPASAACPGTSTAPPGT*GSG QAHRDGARPAAPRPSHPSAGPAAGPSG
1915	9966	B	2860	1	196	MAEGNHRKKPLKVLESLGKDFLTGVLD NLVEQNVNLNWKEEEKKKYYDAKTEDK VRVMADSMQEKQX*
1916	9967	A	2861	1	988	MGSLEGNHRKKPLKVLESLGKDFLTGVLD DNLVEQNVNLNWKEEEKKKYYDAKTED KVRVMADSMQEKQRMAGQMLLQTTFN IDQISPNNKAHPNMEAGPPESGESTDALK LCPHEEFLRLCKERAEEIYPIKERNNRTR LALIICNTEFDHLPFRNGADFDITGMKEL LEGLDYSVDVEENLTARDMESALRAFAT RPEHKSSDSTFLVLM SHGILEGICGTVHD EKKPDVLLYDTIFQIFNNRNCLSLKDKPK VIIVQACRGANRGELWVRDSPASLEVAS SQSSENLEEDAVYKTHVEKDFIAFCSSTP KYSWCCHLEEVFRKHCSQ
1917	9968	A	2862	12	914	GSFQRCKKGQRLFPMAEGNHRKKPLKV LESLGKDFLTGVLDNLVEQNVNLNWKEE EKKKYYDAKTEDKVRVMADSMQEKQR MAGQMLLQTTFNIDQISPNNKR**IGVTE AEITTYVLQYPAHPNMEAGPPESGRIL PDCLKVLCPHHEEFLRLCKERAEEIYPIKER NNRTRLALIICNTEFDHLPFRNGADFDIT GMKELLEGLDYSVDVEENLTARDMES ALRAFATRPEHKSSDSTFLVLM SHGILEG ICGTVHDEKKPDVLLYDTIFQIFNNRNCL SLKDKPKVIIVQACRGGEC
1918	9969	A	2863	12	1353	GSFQRCKKGQRLFPMAEGNHRKKPLKV LESLGKDFLTGVLDNLVEQNVNLNWKEE EKKKYYDAKTEDKVRVMADSMQEKQR RMAGQMLLQTTFNIDQISPNNKAHPIM EAGPPESGESTDALTLCPHEEFLRLC*RK ELKEIYPIKGRRKQPHTAGLFFICITEFDH LPPRNGADFDITGMKELLEGLWDYSV GVGRRFLTARGMDSALARAFATRPEHKS SDSTFLVLM SHGILEGICGTVHDEKKPD VLLYDTIFQIFNNRNLPQV*RDKPQGSSI VQACRGANPSGN*WVRDSPASLGKW PSSQSSGEPWRKDAV*QDPHV/ERRDFIG FPGSFKRPHNRAPWERPAQWGSIFITQLI TCLPRNPWCC/HTLEEVFRKGTAHLETP RIAKAQMPTIERTVR*QGYFYLFPGEFE NWEHGKQPSPLNPTFKEAPFFVTACIF
1919	9970	A	2864	66	392	
1920	9971	A	2865	131	551	KIRGVSCPSAPKSGEQTGQHHNINTGFHP LPLGAVTSPVPQPGDRLCPPSSPEPAQ PAQ/C*PCSDSGRSPGPGKAWTVAPC PEPSVFCLQSPGFEPWVLAHPPSSERR ASSGLDDDLPAQETGNGSGATRCS

1921	9972	A	2866	943	1109	LMVLSDFIFKLKI/WPGAVAHACNLSTLG GRGRWIT*GQQFETSPASIVKPPSLLKI
1922	9973	A	2867	112	1078	ESSRQALLAKPLSACAEQPARAEVGAAT ALPVRWASGEMAPSGSLAGPLAALVLV LWGAPWTHGRRVTNVRVITDENWRELL EGDWMIEFYAPWCPACQNLQPEWESFA EWGEDLEVNIKVDVTKIQPGLSGRFII VTALPTIYHCKDGEF*AVIQGPRTKKDFI NFISDKWKSIIEPVSSWFGPGSVLMSSMS ALFQLSMWIRTCHNYFIEDLGLPVWGSY TVFALATLFSGLLLGLCMIFVADCLCPSK RRRPQYPYPYPSKKLLSESAQPLKKVEEE QEADEEDVSEEEAESKEGTNKDFPQNAI RQRLGPSLATDKS
1923	9974	A	2868	1	448	
1924	9975	A	2869	1	536	
1925	9976	A	287	1	2072	FRRSPSPAAVSLGLGVAVSSLVNGSTF VLQKKGIVRAKRRGTSYLTDIVWWAGTI AMAVGQIGNFLAYTAVPTVLVPLGAL GVPPGSILASYLLKEKLNILGKVGCLLSC AGSVVLIHSPKSESVTTHAELEEKLDQS RVGGLPCASLLVMLAAAHLLDPCRPMG PPTSWSTSASAPCWADTPCLPPRASGWR PKTSCITTRPVREPSACAWYSWPCSAAA SSSSSGTRNKALECFDSSVFGAIYYVFT TLVLLASAILFREWSNVGLVDFLGMACG FTTVSVGIVLMRVFKEFNFLGEMNKS DTWRQSSPLIVAPRDHFHLERGVOFQNM NSVMGSHLVMVALSPGVDFIPQDDPAA LLVTELFANRLVSGYAPATGLQGTLQY GNTLMEVMPKICRLPRHECGSPGP*PGSC APPPSPHSTR/RRPPRSAD/CGPCKGTGTR RERAPGAG*AEAAGPGEAGGAGAGAANA GAGAADAGAGGADAGAGGAGAGAGG AGAGAGGAGAGAGGAGAGAGGAGAG AGGAGAGAGGAGAGAGGAGAGAGGA GAGAGGAGAGAGGAGAGAGGAGAGA GGAGAGAGGAGAGAGGAGAGAGGAG AGAGGAGAGAGGAGAGAGGAGAGAG RAGAGAGGAGAGAGGACAGAGGAGAG AGGAGAGAGGPVAGAGGAVCSQTIFTR SHGGLHLWRPC
1926	9977	A	2870	1	5193	
1927	9978	A	2871	1	356	
1928	9979	A	2872	1	401	
1929	9980	A	2873	151	5459	AGARRRGRGGEAPLLPGLAAAEPPRAR PDGLAEPVVRGRRVSGSPRGTMASAKVR LKKLEQLLADGPWRNESALSVETLLDV LVCLYTECSHSALRRDKYVAEFLEWAK PFTQLVKEMQLHREDFEIKVIGRGAFGE VAVVKMKNTERIYAMKILNKWEMLKR AETACFRENRDVLVNGDCQWITALHY AFQDENHLYLVMDYYVGGDLLTLLSKF EDKLPEDMARFYIGEMVLAIPIHQLHY VHRDIK
1930	9981	A	2874	1	764	MEKIPILRSLRAREQQAGKDVTLQGEHQ HLPEPGCQQTVPVLSVGRPPDTPGPETNS MEAAPGSPPGEGCPACSRCLRWEPPPGR PCE*PEESPAGT/PAPCPGSPG/GPAAQS LPPLPG/PLQPSRPSA/SGPAGHRHPEG GAGQAAEGQ/GPRGQPRSSLQTSPRPL AAPVPM/PRGLAWQDVSEPPPGCSGL NSSQKSPLSERPGPPVSGEA/GP/DGSSHS AQLQPPNRAGSGLESVSVSLEGQSRGA RD

1931	9982	A	2875	1	1641	MKVCSSIAEVSDTTNPPSRTNSGHMTSV LKQALKDPCRTRHYRLVLWTLERTEVL DLFIERFCMTGGNSPICYLKAYHTNLYLS ADAEKVREAIDEGIAAATIFSPSRDVVVS QSQLRVAFDGDVLFSDSERIVKATLD RFFEHEKAHENKPLAQEQGSTSFPDKVE AFRSPSVPLPITGHSANVYQTPTCARRRT TRPLVNWELIPRDNPPLPPRQAFRDLGQS PAFSDAVATTSAPVFGGDCHLSEVRGAE TRQPAFAMKRPKEPSGSDGESDGPIDVG QEQQLRSSKLEKAEVLQMTVDHLKMLH ATGGTGFFDARALAVDFRSIGFRECLTE VIRTPTIWLLPGRSKAVESQSQFTGAHS TLGEPTAKKVA*SNPQVYMDIKIGNKPAG CIQTLLRSDVVPMTTENFLYMCTH/SKGL GFKGSSFHRIIPQFICQGSDFTNHGGTRG KSIYKKKFDDENFIFKHTGPGLRRHGTK CPMAHLALMEASKGQDQHPLLRKERA QQVHDVVKLTRGRGRGISLKRIARSLCK DKETGLCTLTWH
1932	9983	A	2876	1	949	
1933	9984	A	2877	185	339	
1934	9985	A	2878	673	1085	GEPTAKKVA*SNPQVYMDIKIGNKPAGCI QTLLRSDVVPMTTENFLYMCTH/SKGLG FKGSSFHRIIPQFICQGSDFTNHGGHQGS AQVHGKCPMAQFGPHGGLKRAGPAPSS TGKERAQQKQGESAITSQPRSWKLT
1935	9986	A	2879	141	1959	PRPANLLKKGQITMSATVVDAVNAAP LSGSKEMSLEEPKKMTREDWRKKKELE EQQKLGNAPEVDEEGKDINPHIPQYISS VPWYIDPSKRPTLKHQRPEKQKQFSS SGEWYKRGVKENSIITKYRKGACENCG AMTHKKKDCFERPRRVGAKFTGTNIAP DEHVQPQLMFDYDGKRDRWNGYNPEE HMKIVEEYAKVDLAKRTLKAQKLQEEL ASGKLVEQANSKPHQWGEEEPNSQTEK DHNSEDEDEDKYADDIDMPGQNFDSKR RITVRNLRIREEDIAKYLRNLDPIAAYDP KTRAMRENPYANAGKNPDEVSYAGDNF VRYTGDITSMGQTQVFAWEA/YDKGSE VHLAQADPTKLELLYKSFVKK'EDFKE QQKESILEKYGGQEHLDAAPAEALLA/QT EDYVEYSRHGTVIKQGERAVACSKYEED VKIHNHTHIWGSYWKEGRRGNKCCHSF SKYSYCTGEAGKEIVNSEECINEITGEES VKKPQTLMEHLHQEKLKEEKKKKKKKKK KHKSSSDSDDEKKHEKLLKALNA*EA VRLHVKETMQIDERKRPVNSMY*TSR PUEEEMEAYRMKVRQRPDDPMASFLGQ
1936	9987	A	288	1	390	ITLGPDSSIIGIWSGNQHKQDPYIASMEHH TDWVNDIVLCCNGKTLISASDITVKVW NAHKGFCMST/YKDT*ASSLSGNKDSIYS LAMNQLGTIIVSGSTEKVLRVWDPRTCA KLMKLIGHTDNVKALL
1937	9988	A	2880	711	1140	GVGVCFPPVPSSLRVLGRWA AFCALPGR SLRKSRLWGWGTGHTQS*EGELPWKAG/ WQRCFWRGGRQTLPLTCSPTRGRA AQEGAGCKARGAWWVRSPGRAGRPLR RGGSRVTLNSQMGSDATGETEWIKEMK PKKKKKMS
1938	9989	A	2881	1	649	MAGALVRKAADYVRSKDFRDYLMRVT QQPYKVFNSGPWAFSSSSYSRPSAHISS LIVSRVGSSTSFQGGLGAGMGVEPLDP HENLYVDFYRGFIHNCQNLEANKMSFG RSQSEKAAYYLVPITTQRSGKGKIMELVE RSVVARVEHFWGPVANWGLPIAANDM KKSPEIISGRMTFVQPRNWLLFACHATN EVAQLIQGGRLIKHEMTKTASA

1939	9990	A	2882	1	389	
1940	9991	A	2883	27	554	LAVGCRGVGLGVIGSGKRQQRQGPLGV SVSAQPCAGALVRKAADYVQSKDFRD YLMSTHFWGPVANWGLPIAINDMKI KSPGDYSVGRMTFALC\CYSLTFMEILP YKVQI*PLNWL/LCFACHGTNEVRPSFIQ GEGRLIPNTRMDLKRASGINQWGKGKN KVFEGDSLCPGCC
1941	9992	A	2884	1	162	QCAEKIASNPKIVVAMAKESVNAAFKIT LPEGDDRKEGMPFVEKRKANFKDQ
1942	9993	A	2885	1	196	
1943	9994	A	2886	148	427	CLLGFTHHSASHDQPLPAGAGGTQRLTR AVGKSLAMEMVLTGDRISAQDAKQAGL VSMICAVETL*CLLGFTHHSASHDQPLPA GAGGTQRLTRAVGKSLAMEMVLTGDRIS AQDAKQAGLVSMICAVETLVGGAIQC AEKIASNSKIVVAMAKESVNA
1944	9995	A	2887	1	1484	EATLTRPRPAGGPAAGWYCPSAKTSGQL GAGFTFSPLEHCHPLSPSHLAVHPAGAGP VQQANREAPASPIFGLACCSGPVPLDNA AGTPRIFTSPTLRPLARGANFEYIIAEKR GKNNTVGLIQLNRPKALNALCDGLIDEL NQALKTFEEDPAVGAIVLTGGDKAFAAG ADIKEMQNLSFQDCYSSKFLKHWDHLT QVKKPVIAAVNGYAFGGGCELAMMCD IYAGEKAQFAQPEILIGTIPGAGGTQRLT RAVGKSLAMEMVLTGDRISAQDAKQA GLVSKNCPF*DTGWKEAIQFAEKIASNS KIVVAMAKESVNAGRSPNLSECIYLEGV AVPRACRWLEAGYSEESILKERRLLSPE VFGKVLPWERMLAPALEPQRLPPSAHL DLLCLASCKERAWNEQSQRSSWCRPRP ALALVLSFLVFI LGYFSLFAAPLPPHSLSS RAQFAISPFQFLSLLGAVGYRSVTFGGH SRAVGSARSPLGQCL
1945	9996	A	2888	1	946	GRGVQRAMAALRVLLSCARGPLRPPVR CPAWRPFASGANFEYIIAEKRKGKNNTVG LIQLNRPLPVNWLCCLID*LNQGLKIF EEDPAVGAIVLTGGDKAFAAGADIQK LQNLFSRDCYSSKFFGRHWGPPSPRVK KPVIAAVNGYAFGGG\CELCH*CVDIIL/ YAGEKAQFAQPEILIGNLPRVRGGTQED SPVPVGKSLAMEMVLTGDPDPQPQDA QASRVLSSKICPVETLVEEAIQCAEKIA/ SNSKIVVAMAKESVNAFEMTLTEGSKL \EKKLFYFNLWPLDDRERRG*PRFVGKE KGPTFKDQ
1946	9997	A	2889	1	384	VRDYNLTTEEQKAIKAKYPPVNRKYEYL DHTADV/QWIVLHRA*YFFRLHAWGDT LEEAFEQCAMAMFGYMTDTGTVEPLQT VEVETQ/GWGEEFSLSKHPQGTEVKAITY SAMQVYNEENPEVFVIIDI
1947	9998	A	289	1	1050	FRVNMQDGGPSPAEHSKAEESAGMEAR FLGLPDAAGSSGPTPARRCPAPRPAGVS YVIRDEVEKYNRNGVNALQLDPALNRLF TARRDSIIRIWRVNVQHKQDPYIASMEHH TDWVNDIVLCCNGKTLISASSDTTVKVW NAHKGFCMSTLRTHKDYVKALAYAKG* \ELVASAGLDRQIFLWDVNTLTALTASN NTVTSSLSGNKDSIYSLAMNQLGTIIVS GSTKVLRVWDPRTCAKLMKLGHTDN VKALLNRDGTQCLSGSSDGTIRLWSLG QORCIATYRVHDEGVWALQVNDAFTHV YSGGRDRKIYCTDLRNPDIRVLICEEKAP VLKMELDRSADPPPAI

1948	9999	A	2890	1	332	RDYNLTTEEQAIAKAKYPPVNRKYE*DDL QSLLFHFLDEWLYKFSADFFIPREVKVL SIDQRNFKLRSIGWGEEFSLSKHPQGTEV KAITYSAMQVYNEENPEVFVIIDI
1949	10000	A	2891	3	425	SFMAQEEEDVRDYNLTTEEQAIAKAKYPP VNRKYEYLDHTADVQLHAWGDTLEEAF EQCAMAMFGYMTDTGTVEPLQTVET QVHADEFFIPREVKVLSDQRNFKLRSIG WGEEFSLSKHPQGTEVKAITYSAMQVY NE
1950	10001	A	2892	91	598	LKNRRRSRPSIRQSIGSTSVSRWLTSLFTY LDHTADVQ*V*REFIPLKPRQ*ED*MFQS WLHAWGDTLEEAFEQCAMAMFGYMTD TGTVEPLQTVETQGGDLQSLLFHFLD EWLYKFSADFFIP/GWGEEFSLSKHPQG TEVKAITYSAMQVYNEENPEVFVIIDI
1951	10002	A	2893	359	938	IYFFRLHAWGDTLEEAFEQCAMAMFGY MTDTGTVEPLQTVETQGK*LQVLLF HFWDEWLYKFSADFFIPGKLCIAVF*K RL*RP GAVAYACNPSTLGSRGWIT*GQ EFETSLTNKEVKVLSIDQRNFKLRFNGW GEEFSLSKHPQGTEVKAITYSAMQVYNE ENPGSFCDHWTFTTKIKRLPTGKK
1952	10003	A	2894	220	345	LKKEKSLMEKHFF*QTDSSVSNLEKNHE PSDIVNSLQWAMVS
1953	10004	A	2895	1	281	
1954	10005	A	2896	83	425	
1955	10006	A	2897	1	3600	
1956	10007	A	2898	1	197	
1957	10008	A	2899	1	963	
1958	10009	A	29	376	610	FPAFWESQVRWIASASGVQDQPDQYGEI LFLKLQKLGGHGG/IR*EDHLSLGGQGC KEPRLYHCTPAWVTEHYLVSKK
1959	10010	A	290	1	366	FPNSSRLIWPECNRIKEESLVASPGSFCK PHLDLALGLGL/GVGLMVELGLKLGLFL GLGFDLGVGLGIGL/GVKLGLSDGY/GLG FRLGLGL*AGLVGLGIRVGLKPLGLEI FVGLILCICI
1960	10011	A	2900	49	247	DLTRNHSPLQTVHDVRWFMIFQV*YRR IKFVKRNASPSGI*NII*TINTFVCIYK*IFR YKNMHI
1961	10012	A	2901	1066	1768	NPQSSSSEGS*DFPRLTVNRLVQRSE VTQAPGQYTVDVEGHGCTFIQATLKYN VLLPKKASGFSLSLEISKELLFDCF*P/RQ VNLQYTGIRNKSSMVVIDVKMLSGFTPN PCHPIELENKGQSD*E*KSNDPCSFSY LENVFGQPDSPFFFC*AEQPLCSTFQPGP SHGLTDYEEKEEYALAFYQHRTVVPVSE *DKAITRRVGEAISCNKLILLYQTWKKIM NHLTS
1962	10013	A	2902	620	1124	ETPAPCLQAWVPQACREGPLAFRELLGG VLALSTPGERCSVSSEFETRARCTQ/PC WGSPKFLSPPHAKPAITLRLPELKEAPWP APSLGPPGGLSTPPSGIPCPPQCCQGHVA LCRGLRPSW*TE*PVCWKMPRCPEKLP PGIFGNETYLVPIVNWPTGTSFLSTY
1963	10014	A	2903	2	399	WKESQGRCEW*VARGL*ADLT*GFHWH LPGAPPWGLLTGGGQGRGHGRGGWA LSGRPPRGFHWHLPGAPPWGLLTGGG QGRGHGRGGWALSIGPPRLQSFQVWA ESPLPQLPWGCVAGISVHTGVS WLP

1964	10015	A	2904	73	867	GRAEQTS DTHFFASTSACSHNLTMSCPN YCSGNSNSGSLRTSRHIPLTSIDLCPSTSVS CGDVLYLPTSSQDHTWVTDNCQETCGE PTSCQPVHCETGNLETSCGS/SHC/CTTCP GPCQGSSFLPASFFSSSCLPVSCRTTEVC/ RPAAVRPLRAVVQ*FTSP*GDCVAQCLAR PQFCLSKSCQPQNLLTSGCQPSSCLAYRP QSLHVVSSSLRPLGPLFSGCQPLTHVFST VSSHLALEHGSPNICFLQSSILLHRSSSRA VCSSALF
1965	10016	A	2905	1	478	
1966	10017	A	2906	800	1209	LFSSGAVPQRTSPHQAPKNMQTSGRLS NVAPPICILRKNPPSARNGGHET*CPNSL NSNQQLVDLKLTVDGLEKEARDFYFSKL RDIELICQEHESSENSPVISGHIGILYATEEG FAPPEDDEIEEHQEDQDEY
1967	10018	A	2907	1	3961	MSSKHLKSEQIKDQIRVPVISLIPKIHAQ EEQLSSTAVCSCPARVFCVTKVVAVFQ MWMLHDLVQMVPRLQWLPHIFTLFSN PLILYHSHELAPSF AEQRECKLAYMPVS SASAHLLLQAFDFNLSVLSLARNML ANSASVRILIKGGKVVNDDCTHEADVYI ENGIIQQVGRELMIW RGQGLVIPGGIDT STHFHQTFMNATCVD DFYHGTKVMLLF AKGGFLFGFILLGLLQTRLMASLAKS D
1968	10019	A	2908	48	308	NPRCGPGSRFVSSWCSVFPEAGGG*RK EPGMRGAGYKQRGMGS*SKGPFAFIMPF PRPRPGFVLPPPPLPDLNKGPHFSQKKK KK
1969	10020	A	2909	3	214	
1970	10021	A	291	49	418	FMINPPNQVGRYRNINLTNIYQKPLAP VIL/HGEIFKIFLTGIGVTORYPLSPFKV FLAALDRK*REGAGEEVNGIENKRIKLSF VSDMIVYVENSKEKNGQLELMRGICKT ATKLQKL
1971	10022	A	2910	312	387	
1972	10023	A	2911	3	216	NCLLRPKNKSVRWGP GAGAALLRPSA ALGAGSRACSVPPAQAQTPRPQVSAPA WGPGR AARGSGRMERRMKAGYLDQQV PYTFSSKSPGNGLAR/TLIGPLGKLMDP GSLPLDSEDLFQDL SHFQETWLAEAQV PDSDEQFVPDFHSENLA FHSP TTRIKKEP QSPRTDPALSCSRKPPLPYHHGEQCLYSS AYDPPRQIANQVPCPWCPLDSRPYSPFPG QSNGIS*DPLAPPSTLAMGTSGNIAPSSS SPWDICHSFTSQGG/APG/HPSQAPYQH LSEPCPPYPQQSFKQEYHDPYGTGGAS QAVGTRGGGSMGAQ/RYPGAGVVIKQE QTDFA YDS DVTGCASMYLHTEGFGSPSP GDGAMGYGYEKPLRPFPDDVCVVP EKF EGDIKQEGVGAFREGPPYQRRGALQLW QFLVALLDDPTNAHFIAWTGRGMEFKLI EPEEVARLWGIQKNRPAMNYDKLSRSL RYYYEKGIMQKVAGERVYVYKFVCEPEA LFSLAFPDNQRPALKA EDRPVSEEDTV LSHLDESPA*PPYSGLAPRPSVRAPGHA RYPRLQPRRPGLRSRPLGAPAVRREG AAGWSSG
1973	10024	A	2912	119	444	GFGVGTTPALTCPVTPSYSPKARPS*T/EL EPPSRCQPQCQTLGPQAEQNQMSSAPSL ASPPSKQPPLMANRCCCVRSRHLCGIQ NRLGFWDSREERGGDATWVSVD

1974	10025	A	2915	1	574	GADGGGAFRLSGPGP*APPGPSSALMMP SSCPWRTGALGPSPAGSRALGRCTSSVG PGSRWLTRTSSPGCAYQNLNEDGAQ ASPEPDGGVGTGLGPGIPAE/PSIRSFVV LQHHSAAAPSAPTTAAAGPNTL*SRRT AEWCWPPSCSCCLGPGADPGRRGNWRR PPLPRCLQRQSSSCRAFLLLVPGV
1975	10026	A	2916	355	511	LFLETESCFVAQAGARWAVITHCSLKL/L GPCNPPISAL*VARTTGMSHHTP
1976	10027	A	2917	1815	2152	INKEMSGQARWLTPVIPALWEVKVVDH LRPGVRD\HQPQQQSETPVSTTIQK*ARY GGMCL*S*LLRRLTQQNHLNQQGRGCSE LRSRYCTPAWARQSKTSSQEKKKKEKEM PW
1977	10028	A	2918	315	480	
1978	10029	A	2919	1	1845	
1979	10030	A	292	5	377	FMINPPNQVGRYRNINLTNISQKPLAP VIL/HGEIFKIFLTGIGVTQRYPLSPLPFKV FLAALDRK*REGAGEEVNGIENKRIKLSF VSDMIVYVENSKEKNGPLLELMRGLSK NATKLQKLI
1980	10031	A	2920	407	802	
1981	10032	A	2921	914	1134	QESLLLQFTKSSSCPSETTSARTLLSILLS AFWAKPFNKSLSGSKLSHIFLSSSDPSK/A VPTSAYYPVPKSLPH
1982	10033	A	2922	1	447	
1983	10034	A	2923	218	544	SGFSLSLRGSISFSL/CFKVGMCVITYPRCY C*SPVP*KPLIKPGWVSELKPMNWASC SRTLASFLQAARSHPWTPMKMETMEQ SKLRSQCKPAAGAVDPRAVVHGT
1984	10035	A	2924	3	260	
1985	10036	A	2925	1	534	
1986	10037	A	2926	198	562	LKCGKQWSDPITSPQTESQLLGSSQQQL HQQRHLQGP*K*NRDSPLCFSLSSCPIPK TYTNRHILLP/SSSKSLCKFL*PA*ISPQKM GFSFLSQSVCKFSKLLCSASLIKLFKAFNSI QVTS
1987	10038	A	2927	72	270	
1988	10039	A	2928	325	535	
1989	10040	A	2929	492	696	
1990	10041	A	293	346	489	QLQAMAIFEYLKKTFLRPGTVPHSCNPS TLAGGRGGWIT*GQLEASP
1991	10042	A	2930	822	1759	SSAEPSPSSPAPSQQTAAAGAPPLCAVS PMASASGAMAKHEQILVLDPPTDLKFKG DG*VFIRPEQYYTV*KWCKRSKRHGPF PFTDVVTNLKLRNPISDRKVCVKVKT VPS/RRYCVRPNSGNDPGSTVTVSVML QPFDYDPNERSKHKFMVQTIFAPPNTSD MEAVV/WKEAKPDELMDSKLRVCFEMP NENDKLNDMEPSKAVPLNASKQD\GPM PKPHSVSLNDTETRLMEECKRLQGEM MKLSEENRHLRDEGLRLKVAHSDKPG STSTASFRDNVTSP\PSLL\VVIAAIFIGFF LGKFI
1992	10043	A	2931	2	417	FVAQQLQGDSLHFMQALYGQHFPIEVR HYLSQWIESQA/WNTYDRCPMELVRCIR HILYNEQRLVREANNSSPAGSLADAMS QKHLQINQTFEELRLVTQDTENELKKLQ QTQEYFIIQYQESLRIQAQFGPLAQLSPQ
1993	10044	A	2932	1	855	
1994	10045	A	2933	1	810	

1995	10046	A	2934	224	2606	TMAVWIIQAQQLQGEALHQMQUALYGOH FPIEVRHYLSQWIESQAWDSVDLNDPQE NIKATQLLEGLVQELQKKAHQVGEDGF LLKIKLGHYATQLQNTYDRCPMELVRCI RHILYNEQRLVREANNNGSSPAGSLADAM SQKHLQINQTFEELRLVTQDTENELKKL QQTQEFYHIIYQESLRIQAQFGPLAQLSP QERLSRETALQKQVSLEAWLQREAQT LQQYRVELPEKHQKTLQLLRKQQTILD DELIQWKRRQQLAGNGGPPGSLDVLQS WCEKLAELIHWQNRQQIRRAEHLCCQLPIP GPVEEMLAEVNATITDIISALVTSTFIEK OPPQVLKTQTKFAATVRLLVGGKLNH MNPPQVKATIISEQQAKSLLKNENRND YSGEILNNCCVMEYHQATGTLAHRN MSLKRIKSDRRGAESVTEKFITLFSQ FSVGGNELVFQVKTLSPVVIVHGSQ DNNATATVLAWDNAFLQEPGRVPFAVP DKVLWPQLCEALNMKFAEVQSNRGLT KENLVFLAQKLFNNSSSHLEDYSGLSVS WSQFNRENLPGRNYTFWQWFDGVMFV LKKHLKPHWNDGPILGFVTKQQAHDLLI NKPDTGTLRLRSDSEIGGITIAWKFDSE RMFWNLMPFTTRDFSIRSLADRLGDLNY LIYVFPDRPKDVVYSKYTPVPCESATA KS/VLDGYVKPQIKQVPEFVNASADAG GGSATYMDQAPSPAVC/PPQAHYNMYP QNPDP*VLDTDGDFDLEDTMDVARRVEE LALGRPMDSQWIPHAQS
1996	10047	B	2935	123	219	XPPTGMTMDKSELVQKAKLAQAERYD DMAAA*
1997	10048	A	2936	1	1815	
1998	10049	A	2937	1	510	
1999	10050	A	2938	107	961	VVGLGRKRSSRSGASLGRVFPSPPTG MTMDKSELVQKAKLAQAERYDDMAC SSERHVTEQGHRELQPKKRNLSSVAYK NVVVGARRFLPGRVISSIEHENREGMKKK QQMGKVEYP*EDRRQNLQDICK*CFWEL LADKYLIPN/AVTQPE*GVLL*KLKGGYF RYLSEVAS*DNKQTTVSNSQPGFTREHF EISKKEMQPTHPIRLGLALNFSVFYIEIL NSPEKACSLAKTAFDEAIAELDTLNEESY KDSTLIMQLLRDNLTLWTSENQGDGED AGEGEN
2000	10051	A	2939	208	1178	EGRGHLARSFARKGLCSLQPSHGRVSRD LGRYKKCILPIRLWIEKQEEHWTWSQGM TMDKSELVQKAKLAQAERYDDMAAA MKAVTEQGHLSNEERNLSSVAYKNVV GARRSSWRVISSIEQKTERNEKKQQMG KEYREKIEAELQDICNDVFELLEQISLFP NATQPRKVKVFLLEK*KGDFRYLF*K WQS*RRQTQPTCVETPQQLPRKQFEISK KEMQPTHPIRLGLAPKFPQSFYIEPKL PLKKAW*AWAKTALCFRHFDSNLLNL DTLEWKSLLIKDSTSDSWQLLRDNLTLW DIRKTRGDEGDAGEGEN
2001	10052	C	294	140	172	
2002	10053	A	2940	1	459	IEIHKCGGIPAVLAAPAMGLEFLDLVS QPSRAVYIFAKKNGIPLELRTVDLVKGQ HKSKEFLQINSLGKLPTLKDGFILTE/SA NRSVYLQGGCWHITEMRFSKCKAEGPA KRSAILIYLSCKYQTPDHWYPSDLQAR ARVHEYLGWHAD
2003	10054	A	2941	2	310	
2004	10055	A	2942	205	454	

2005	10056	A	2943	5	437	AQESRDCGDHDRATALQPGQOSEILLQ RLPPENAVD*VALEGSQPL*TLACLLSCK YQTPDHWYPSDLQARARVHEYLGWHA DCIRGTFGIPLWVQVRRANLPFLSFLAP VPSLQLHVKLCTDKTSLVLSASILRCSI HTS
2006	10057	B	2944	307	447	XSAILIYLSCKYQTPDHWYPSDLQARAR VHEYLGWHADDCIRGTFGIPL*
2007	10058	A	2945	2	384	
2008	10059	A	2946	1	1278	MPGLGFREKKGGSRTPVIPSARGCGLPAPI LCTKWELPLSGSSRCLAAAALQGTVWT AESSSLTPAFQSRGWGLIPYFPARRDPAT AAAHTALSAFTAIPAVLAAPAMGLELFLA DLVSQPSRAVYIFAKKNGIPLELRTVDLV KGQHSKEFLQINSLGKLP TLKDGDFILT ESLAILIYLSCKYQTADHWYPSDLQGF GARVHEVPWAWHADLHPVGTFWYYP WGVQGVWGHSLGVQVPEEKVGTQTRT AMDQALQWLEDKFLGDRPFLAGQQVT ADLMALEGS*CKPVALGYELFEGRPRLA AAWRRIRVEAFLGAELCQEA/HTSILSIL EQAAKKTLTPSP*EAYQAMLLRNRP PGSGMGAKEISNKDSFCYLLAPFYL PQSLLSKLQCEALHRQRHSSVLWQVLL LRCKHT
2009	10060	A	2947	298	456	NIYQLE*K*FKNGQVWLGAVVRACNPST LGGR/WIPWGQEFGTSLANMVKPRLY
2010	10061	A	2948	59	190	ARSFHSDAPQGHLECHWCPGVLEL*GHR NPDTCPHLEQGISSK
2011	10062	A	2949	319	460	HFSYIHWFYTEKYKIKITHQDYLQKFIIY/ CTEEKHAYH*PNKILFIT
2012	10063	A	295	2008	2438	WSLHRPRGPLLWHMPRVPPPLTGL*SSP HDSVGPQPWKSPPTTSFNSPDPPENVQN HPGKPVAKSPFPQRNGH/PPKR/PTWGS STCWGEVIRSGSPPTTKPVWPTSCEFGS VLPPEDETVFP*PHFPVSLILFAISFALVCG D
2013	10064	A	2950	78	3703	FQELGAREPFGNMYDADEDMQYDEDD DEITPDLWQEACWIVISSYFDEKGLVRQ QLDSFDEFIQMSVQRIVEDAPPIDLQAEA QHASGEVEEPPRYLLKFEQIYLSKPTHW ERDGA SPMMMPNEARLRNLTYSAPLYV DITKTVIKEGEEQLQTQHKTFIGKIPIML RSTYCLNGLTRRDLCELNECPSDPGR YFIINGSEKVLIAQRKMATNTSFCRLQK TDSKYAYTAGECRSCLNSSRPTSTIWVS
2014	10065	C	2951	162	293	MGNLLKVLCTDLEQGNPFLLDFENAQP TESEKEIYNQVVAL*
2015	10066	A	2952	286	1327	AGAKFFP*F*KVADAQPTSESEKEIYNQV NVVLKDAEGILEDLSYRGAGHEIREAI QHPADEKVAKKAWGAVVPLVGLKK FYEFSQRLEAALRGLLGALTSTPYSTQH LEREQALAKQFAEILHFTLRFDELKMTN PAIQNDFSYYRRTL SRMRINNYPAEGEN EVANELANRMSLFYAEATPMLKTLSDA TTKFVSENKNLPIENTTDCLSTMASVCR VMAGNTEYRSQILQNEETVSFLSWRAM VGCS*YSYDHRTSSGEAFCLKLPKFD MKGCIVLKDQPPNSVEGLLKSLRYTTKH LEWMRLPPSKLKSMLPITILGIKHPAVDR RQYSAMTENAVF
2016	10067	A	2953	75	478	AVKMCDF*DTA*FKEAFQLFDRGTGDG KILYSQCGDPKSDENMVKVLD FEHFLP MLQTVAKNKDQGT*DYVEGLRVFDKE GNGTVMGAEIRHVLVTLGEKMTTEE VQMLVAGHEDSNGCINYEELVRMVLNG
2017	10068	A	2954	2	343	

2018	10069	A	2955	34	353	
2019	10070	A	2956	2	303	
2020	10071	A	2957	1	999	
2021	10072	A	2958	255	528	ARYKIHTGKGTDSETGKVLSHSAPCGR CSRWARHPDRSMPHKRFIVDTNQLLS CPATSISTSSSVNVLPRCD/FPEDQTAEFK EAFQLFDRITGDGKILYSQCGDVMRALG QNPTHAENVLKVLPKSDENNVKVL FEHFLPMLQTVAKNQDPGSPMGFMSKE LRVFKYKENGNTVMGAEIRHVLVTPG* KLTEEEVEMLVAGHEDSNMGICINYEAFV RHTPVGVTGPWAGASSAWC
2022	10073	A	2959	26	518	AVKMCDFTEEDQTAEFKEAFQLFD/RKPG DGKIPCTAQCGDVMRALGQNPPLNAEV LKAPGEPPRSDDMSVKEHDCHEFLHIL QTVAQNQGGQGTYYEDYVEDFRVFDKEG NGTVMGAEIRHVLVTLGEED*QRKKV EMLVAGP*RTANGLVSNYEELVRMVLN G
2023	10074	C	296	165	290	MCHRAGPASLSAGQFIHFLVTPMAAPRI SAVCGPESRHQG*
2024	10075	A	2960	453	744	
2025	10076	A	2961	736	1062	
2026	10077	A	2962	295	782	PLLCNPDPGWYWWVKQSEISESKESQEM DARPKLDLGFKEGQTIKLCIGNITNKKGG ASKPRTARGGGLSLLPPP*GKVITPPSS /VKLPSTNHVTPPSIPKSNHGGSDADILLA DLDSPAPVTTPAPTIVSVSNDLWGDFS TASSSVPNQAPQPSNWWVQF
2027	10078	A	2963	192	324	
2028	10079	A	2964	1	1044	
2029	10080	A	2965	1	811	
2030	10081	A	2966	1	750	
2031	10082	A	2967	493	1946	
2032	10083	A	2968	539	1215	
2033	10084	A	2969	414	1762	
2034	10085	A	297	883	1095	GSGV*DQPGVQHGKPPSL*LQNLAEERG GHL*SQLRRRLRQENHLNPGGRCCSEL SRHCTPAWATRAKL
2035	10086	A	2970	449	1305	SKSRMSAEVIHQVEEALDTDEKEMLLFL CRDVAIDVTPPNVRDLDLNRERGLS VGDLAELLYRVRFDLLKRIKMDRKA VETHLLRNPHLVSDYRVLMAEIGEDLDK SDVSSLIFLMKDYMGRIKISKEKSFLDL VVELEKLNLVAPDQLDLLEKCLKNHRI DLKTKIQKYKQSVQAGTSYRNVLQAAI QKSLKDPNNFRLHNGRSKEQRLKEQLG AQQEPVKKSIQSEAFLPQSIPEERYKMK SKPLGNLPLGLIDWHWALRTELSFEDTFTS LGY
2036	10087	A	2971	473	1164	SKSRMSAEVIHQVEEALDTDEKEMLLFL CRDVAIDVTPPNVRDLDLNRERGLS VGDLAELLYRVRFDLLKRIKMDRKA VETPLFKDPPLVSDYGVLMMAEIGEDLDK SDVSSLIFLMKDYMGRIKISKEKSFLDL VVELEKLNLV/APDQLDLLEKCLKNIP QK*P*RQKSQKYKQSVQAGTSYRNVL QAAIQKSLKDPNNFRLMTPYAHCPDL KILGNCSM
2037	10088	A	2972	482	692	EKPL*SYLSSFFHFLEMGSHPRLVCSGV IVAHCSLQLLGSSDVPTS/ASR*LGLTGSH TTIPSLGLFLN
2038	10089	A	2973	1	358	AQLVEFGEHSMAPPAHFRALLYHPGTAT LVPHPASISQHSPPWGNA/RG*PV*RQR HLTAPRSPPHPRFRHKPGKDPRENPSRW PEVPSLPQTHVVPQAADWTNTTVCK NRSTKPOD

2039	10090	A	2978	136	500	GTLPNSSLCESNNGHPRQRGRGSCPSRY TGVPSRPRLSRIQSWIR/HLHPPSPTRPSY SSPQASASPVGLRGHPAQTWTTCSRSP SPVRFSSGSDGEKRLGQSCPHGNDPGAA CISRPPYA
2040	10091	A	2979	242	9991	FKLELHQESDMEFNNTTQEDVQERLAY AEQLVVELKDIIQKDVQLQQKDEALQE ERKAADNKIKKLLHAKAKLTSLNKYIE EMKAQGGTVLPTEPQSEEQLSKHDKSST EEMEIEKIKHKLQEKEELISTLQAQLTQ AQAEQPAQSSTEMEEFVMMKQQLQEKE EFISTLQAQLSQTAEQAAQLSSMQQVV REKDARFETQVRLHEDELLQLVTQADVE TEMQQKLRVLQRKLEEHEESLVGRAQV VDLLQ
2041	10092	B	298	191	494	MKLKRGAGSCKKPGSSGWGPAVGEFHS VQNICARREYQRQDYMDAMAEKQKLD AEFQKRLEKNKIAAEEQTAKRRKKRQKL KEKLLAKKMKLEQKKQEGPX*
2042	10093	A	2980	3	211	
2043	10094	A	2981	1	519	
2044	10095	A	2982	291	686	GLGTFAYISQDVWKSLEYVQAEVCCRGR VFLVCSCGSCWSKSSRCEPPYAVLSIQVE AAHMHEIWCRDSDRDLPWESSCSLLLE KDPP/SGPQTDQPKHLTNFKSDKGDTF YPWTQNSGAGHGLGRQPSLGV
2045	10096	A	2983	1	639	
2046	10097	A	2984	2	423	GFLVLLTSRMKLRTLAKQRRHILSVDPK LRRRSRTGKAAPFWCLIIAGTPLIHPRFK GVRPCRDACLGPSPLAASPAFLGEGQEL ATSARNLTTRPRNACSPGFLLSRVHLCG TPLEI*PPGQGMFAAQDSS*AVSICAGPH WKSDCSTHLAGTPRAPGILAQGSL
2047	10098	C	2985	80	106	MRMKFGLD*
2048	10099	C	2986	259	531	MSPAHKNFQTPEPQRPPIPPEPPPGACY KCQKSGHQAKECLQPRIPPKPRPICAGPH WKLD CPTH LASTPRAPGT LAQGS LTASQ IFLA*
2049	10100	A	2987	3	505	
2050	10101	A	2988	1	1056	
2051	10102	A	2989	1	1482	
2052	10103	A	299	2	478	SGRLPWLAQPPPRCDHRGPRKSRRRSSS PRMRREEQKLKLERLMKNPDKAVPIPEK MSEWAPRPPPEFVRDVMGSSAGAGSGE FHVYRHLRRREYQRQDYMDAMAEKQK LDAEFQKRLEKNKIAAEEQTAKRRKK/R PQS**KKNLLAKKMKLEQKKQEG
2053	10104	A	2990	399	567	ACYKCWKS GHRVKECLQPRIPPKPCPIC AGPH*RSDCSTH LAATPRAPGT LAQGS LTASQ
2054	10105	A	2991	1	468	
2055	10106	A	2992	1	984	
2056	10107	A	2993	1	900	
2057	10108	A	2994	1	522	
2058	10109	A	2995	3	1150	
2059	10110	A	2996	3	500	LEGASYGETKADVAEGKSQKKATEWRS QGQRRKGEETSQLKDCKRTNQLSVKRT NQLSVIWTNQQDVGSYANPLMAAEPAQ AVKLGWRPSPKPHIGDKSVSFWLLWMG SVQQGQKIGP/PSQGNACRPRNSS*SHVP CGGGPHWKLD CSTH LAATPRAPGT LAQGS LTASQ

2060	10111	A	2997	3	603	GHSRPRNWSQWSPRFLWLEAHRPSGSP DSAEQRSQVSDCLGTSRHGTGALFLALG IYAASCYVARFIRVRPHRDAYSLOGRSL DHSPTFQGCQTTOGRLPWSFTLSGKSRF SGEGATTSPAHNKFQTEPQWPGIPPEPP PTGACYTCRKSQHWAKECPQARIPPKPH PICVGPH*KSDCSTHLAATPRAPGTLAQG SL
2061	10112	A	2998	1	669	
2062	10113	A	2999	1	762	
2063	10114	A	3	32	474	LYALRNQIKPPPHVTGGQ*QKQERTKPA WRPPRP/GPPPFIALIGFCSSVPVAVVEL RVEPPGGHWPLSPLGEVRGEWRRPLSGL AS/VGQWLVPSPPEGGGGGWAGSPQVS GGWPPSAHLRNPLSLGDILPAPQHPALS PGGPKLCG
2064	10115	A	30	147	766	GALHLIRKGSPLHGQAHKHVAQQGRGIL SRVHRPTHVHTQGRKATRLGLCSAHGR APHPSFLPLVPVCCS/WHHCETPARPCPLL PCPPSSGASTSRTASSPVLSTLTD*PYLSE TEEQVSPGLTHKASLEPRSDSDAKTSSH PRDWPHPMVDCAAALSWTQPLWMFCG SRLAFHDAPAPAHMRAIWASRAIPAARP GPHLGLAAASC
2065	10116	A	300	72	409	VCSETGFILYCRN/DCKWDAPILETVWFF VRS*TLDMNCTPAIPFLFIYPLEMYGHA Y*MTCTRIFMAALFIATNQKSPKCSINSI HATKYIAMIQLIQLYPYVATWINKVF
2066	10117	A	3000	1	519	
2067	10118	A	3001	1202	1315	
2068	10119	A	3002	1	930	
2069	10120	A	3003	132	248	
2070	10121	A	3004	3	439	
2071	10122	A	3005	1	357	
2072	10123	A	3006	1	765	
2073	10124	A	3007	1	1434	SVAVFVACPAVDYLVKISWELQGDDEEQD GLRNMIWQTLQTKDYEDVRIQNAINI AQGASEAIGQRQSSAAKPRRSGKESVRE PWARVPGALGVAARKYQKMKGIEIKRR ERLKCQAKIERRKRLKDREVGEESKKRP LTGFEIEPPKVTVMKPNQSFTEGGSEVSIM CSATGYPKPKIAWTVNDMFIVGSHRYR MTSDGTLFIKNAAPKDAGIYGCLAKAPK LMVVQSELLVALGDITVMECKTSGIPPP QVKWFKGDLELRPST/CFLLSILAP/PLQS LPSLNFNSFHFLDFLAATPRAPGTLAQG SLTDSFPDLLGLAAED
2074	10125	A	3008	166	421	RPRSERLLWGTSPSL/CALTL*GDPPTTSG PQTNQLKEHLTNFKSGPHWKMDCPHP AATPRAPGTLAQGSLTDSFPDLLGSAAE D
2075	10126	A	3009	1	434	
2076	10127	A	301	92	617	DRVLSLLPRLECSGSILAHNCNVCLP/GFK RFS\CLSLPSSWDYRHTPPCP/V*LVFLVE MGFRHFSQAKSRTL/TGDPASASQKCW NYRRDNLAWLASALNKVINLLKSEIPSF FLVQLSGFSRTLLQGLNFNYHTLVYS NNLPIMQFTFTQDFGRISGKPPFGMILCN REILYIM

2077	10128	A	3010	1478	2240	WQVPLSWGRGKYPSTPSPSPLAASPTFL GQGQVPLNPFSTLSGKSRFPGAGASTPQ PLLLHPQRQVPLSWGRGKYPSTPSPSPA ASPAFLGQGQVPLNPFSTLSSKSRFPRG QETPNRLFPHNLLSLHPNLPFHPDLLS LCPNLPFPCLNPFSAFLEGKNPPPLLRVST LFSGLASFTMGACYTCQKSGHWAKECP QPGIPPKPCPISVGPH*KSDCSTHLAATPG APGTLAQ/GLTDSFPDLLGLAAED
2078	10129	A	3011	1	624	
2079	10130	A	3012	321	512	
2080	10131	A	3013	1005	1251	KGGWSQRHSQGACYTCRKSGHWAKEC PQPGIPPKPRPICVGPB*KSDCSTHLAANP RAPGTLAQGSLTDSFPDLLGLAAED
2081	10132	C	3014	18	56	MAINSIRSLQLM*
2082	10133	A	3015	188	364	
2083	10134	A	3016	602	2459	FWGEGEKATAFLICNLAGCLRCPVDMN SQGSDSNEEDYDPNCEVEKEEEEEED\DP GDIEDY YVGVASDVEQQGADAFDP\EE YQFTCLTYKESEG\ALNEHMTSLSFLSL KVSHSSWLNLYLVNFHWQVSEILDYK SNSAQLLVEARVQPNP/SQKHVPTSHPPH HCAGCGMQVCAKRENLL/SLWACQL*F CRSCWEQHCSVLVKDGVGVGVSCMA\ QDCPLARNTSGTFVFP LLPNEEFEEKY RRYLFRDYVESHYQLQL\CPGADCPMV IRVQEPRA/RARVQC\NRCNEVF\CFKCR QMYHAPTD\CATIRKWLTKLQDDSETA NYTSAHTKDCPKCNICNEKDGG\CNHM QCSKCKHDFCWMCLGDWKTGHSEYYE CSRYKENPDIVNQSQAQA/RREALKKY LFYFERWENHNKSLQLEAQTYQRNHEKI QERVMNNLGTWIDWQYLQNAAKFFGQ GSFSSLLQCRYTLQYTPYAYYMESG PRKKLFEYQQAQLEAEIENLSWK\VERA DSYDVRGDLENPD\ITEPTGGTNPCLKD FHDTLSDVDVPGVRKISLARSRAAH TACLAGSAFHDPQATAQGPTPERHWQH LLVDFCFLFLSLFVSTQGRRPC
2084	10135	A	3017	103	769	GPCCPIHQQLILFQCFKHFSGPLCFQLCK LMMPSKSLVMEYL AHPSTL\GLAVGVAC GMCLGWSLRV\CFGMLPKSKTSKTHTD TESEASILGRQPGSPG*FLVVRN*L*RWG KGERGCPSASHAAVSSPTKQISKKSPE MAQNNGEYWWASPKVGGSKVPDEETLI ALLAHAKMLGLTVSLIQDAGRTQIAPG SQTVLGIGPGPADLIDKVT\GHLKLY
2085	10136	A	3018	99	478	
2086	10137	A	3019	2	87	
2087	10138	A	302	367	619	ETRCRGHPPRDREPPPS*PGIQSSPGVP/PS RPSNKA YPRLPIRPQPPGLSFR\STPPRPS \KPPCPPHIGRHVQPTKTS\AVSILS
2088	10139	A	3020	1	921	

2089	10140	A	3021	1	2203	MGGASARPAAPSGRWGVPLGRPFWEV MSPSARPPRLGGVPNSSLRTHDDGG FVEQRRGKGDSEGLGLRIKLVVVFSW QLVMAFDKAELPSSPKVLVLTVTTRATG GVGLQTLRLQERP GIGQLGALCLICTVR LCGHEMTSTFNPRECKLSKQEGQNYGF FLRIEKDTEGHLVRVVEKCSAEKAGLQ DGDRVLRINGVFVDKEEHMQVVDLVRK SGNSVTLLVLDGDSYEKAVKTRVDLKE GQSQKEQGLSDNILSPVMNGGVQWTQ PRLCYLVKEGGSYGFSKTVQGGKGVY MTDITPQGVAMRAGVLADDHLEVNGE NVEDASHEEVVEKVREGPRRVGYGFDR QQMAAALQKRGLTVKNKQTESNNNINK KRPHKNPIQSAASKIEELEKNYFKIQYG SKKEPVQVKT TVSKKNKAGGITLPDFKL YYKVTVTKTACSRVFWKMNLCVILLIL /VFPMPVFLQLAYFIVSNIRLLHKQRLIF SCLLWLT FMYFFWKLGDPPILSPKHGIL SIEQLISRVGVIGVTL MALLSGFGAVNCP YTYMSYFLRNVTDTDILALERRLLQTM MIISKKRLRGPGVVGFLIYSPVGQIAE DLTLIQEVD ALEELSRQLFLETADLYAT KERIEYSKTFKGKYFNFLGYFFSIYCVW KIFMVKFWSQHISFILVGIIIVTSIRGLLITL TKFFYAISSSKSSNVIVLLLAQIMGMYFV SS
2090	10141	A	3022	2	215	
2091	10142	A	3023	50	1598	GGLWPQRAVASGSGKWRQEPSLHFAMS FLIDSSIMITSQILFFGFWLFFMRQLFKD YEIRQYVVQVIFS VTFASFCTMFELIIFEIL GVLNSSSRVFWKMNLCVILLILVFMV PFYIGYFIVSNIRLLSPLSQA*TTDWL FSCLLGLTFMYFFGKLGDPFILSPKHGI LSIEQLISRVGVIGVTL MALLSGFGAVNC PYTYMSYFLRNVTDTDILALERRLLQTM DMIISKKRMAMARRTMFQKGEVHNKP SGFWGMIKSVTTSASGSENLT IQEVD ALEELSRQLFLETADLYATKERIEYSKTF KGKYFNFLGYFFSIYCVWKIFMATINIVF DRVGKTD PVTRGIEITVNYLGIQFDVKF WSQHISFILVGIIIVTSIRGLLITLTKFFYAI SSSKSSNVIVLLLAQIMGMYFVSSVLLIR MSMPLEYRTIITEVL/GEELQNF/YIHRW/ FDVIFLVRRFSLGILFPLFGLHKQAPEKQ MAPLNLKPYLQTDKRPSGFQKFRI
2092	10143	A	3024	1	158	
2093	10144	A	3025	2	1067	AAELGTFAQTQSGAWRAERSWHNRGP MMWRPSVLLLLLLLRHGAQGKPSPDAG PHGTGRVHQ AAPLSDAPHDDAHGNFQY DHEAFL*REVAKEFDQLTPQESQARLGRI VDRMDRAGDGDGWVSLAELRAWIAHT HQRHILDSVSAAWDTYDTRDGRVGWE ELRNATYGHYAPGEEFHDVEDAETYKK MLARDERRFRVADQDGD SMATREELTA FLHPEEFPHMRDIVIAETLEDLDRNKDGY VQVEEYIADLYSAEPGEEEP AWVQTERQ QFRDFRDLNKDGHLDGSEVGHWVLP QDQPLVEANHLLHESDTDKDGRLATKAE ILGNWNMFVGSQATNYGEDLTRHDEL
2094	10145	A	3026	2	860	

2095	10146	A	3027	2	1681	FGTLGSAFPESCFFQKEDGMKFQIQGIH VQERVTFKDVAVVFTKV* LALLDKAQI NLYQDVMLENFMNMLWIPVVSFQLG SANGESQQEIQGRDKSEVRIFPPGFSLEV AVEWLYSISIDQRDAHPKTDPKLRPEEA QRKSLSRNVKMHCFCVKPRAAPQTEPTLE PTLFPSYPGVRPVPWRMRKEAYGLQSPE SPARSSGHSQGYPGEDLHRAEQRPERFA GSAWTWSLQRLATWKRIQRTGQNTWLE ALANLLANMTQLPGHFSTFLVSAPHPAA EKPLLHSILTHRPVHLLATVTLLPAEEAP LMADITAQAILTPQLCSGTLHVAAR AHADTNLQHVGPAGDTTGDMASMTLL PGSDTVDLKDTAPCIVAAPVPAMAKKG QGIAQAIASEGANPRPWQLPRTVGPVVN GEGKCGVGAPRVPTALPSGAVRRGPPS SRPQTHQQLPPCAWKRCRHSTPAHENSQ VGYTLQSHRGRDAQGLGSSSLASACLD VRHGVKGDYFRTLRFNDCPAGFQTGMG PAAPLFCLISPFQNGGIYPKAVAPLYLGS N
2096	10147	A	3028	51	569	SLRTVPPHYLQGSPTPIPPSSLGASGTR RVES/CVAAPNEQEGSSKGGARPVTICDS QNRPCPPPPSPALPQADPSLKTWLLN HIRWDTDSMICMEDSS**GFK/PNKDSIK VQVRLRGVQGVGHCMGGAALPSTSLSS CLTPFPAPLNSRHTTLAPPLPQPENPAQR TTP
2097	10148	A	3029	2	395	
2098	10149	A	303	2	519	FPLFLFLLLLAFPVALTTRRIQGVQTL VLQAKRVNTRSHPD/GS/QPPTSASFNQ LNPTTNSTPQLRSHVASGYVG*KQMOPY H/PPQHAPAPPQPCPWQVDFTLPAPTRPL LGSGPGSPRRSPGGPPPAGKGPAPGPE CPPTAQRPTT/RQYLGPLFKGDPRNSPRE KPRS
2099	10150	A	3030	2	1038	GLEPFSKLLSFVIQNAVFTLAYLVELCG LCYRAFTKERDKFYLSRSGCSKSFRRLL KLKSPLPDNLLLLVQFNLPDAGTKLD*V NNPEQADDSLCTWDVGTAAAMECVRQY INEVLDFMADMHTLTKLKSHMKTCQA SDEDTFGGHLKVGLAQIAAMDISRGNH RDNKAVIRYLPWLYHPPSAMQGGPKEFI ECVSHIRLLSWLLGSLTHNAVCPNASSP CLPIPLDAGSHVADHLVILIGFPEQSKTS VLHMCSLFHAFIFAQLWTVYCEQSAVAT NLQNQNEFSFTAILTALEFWSRVTPAIL QLMG/HINKVMGRKWVLLSMWISLMGG NLPGNAIWT
2100	10151	A	3031	3615	5322	EVPPNPACYQHQA*SVCLCLHLKSSLTSS RR*/CTDKCHDCGAILEEYDEETLGLAIV VLSTFIHLSPDLAAPLLLDIMQSVGRLAS STTFNSQAESWPPTASSRSCSKARSKVIH PLRIQAPQICLIPDTQTLNPIVDFFDGTFL RTLASSLMDFNELSSIAALSQLEGLNNK KNLPAGGAMIRCLENIATFMEALPMDSP SSLWTTISNQFQTFKLPCLPLKSLLE PFSKLLSFVIQNAVFTLAYLVELCGLCYR AFTKERDKFYLSRSVVLELLQALKLKSP LPDTNLLLLVQYENKMNEKAERLVKL LNSAQQQFQFICADAGTKLAESTILSKQ MIASVPGCGTAAMECVRQYINEVLDFM ADMHTLTKLKTSVLHMCSLFHAFIFAQL WTVYCEQSAVATNLQNQNEFSFTAILTA LEFWSRVTPSILQLMAHNKVLPIMWLP IQSNIKHLASGLQLRLQAIQNHVNHSLR TLPGSGQSSAGLAALRKWLQCTQFKMA QVENPVLGKQPLNFILYEWTPSAPQCQH SGLAIMGLKTNNLDPAQAGWGNHIGYLY

					NPLS
2101	10152	A	3032	3	1078
					FFSSVFPAIEPGERASARRRVSRAGCLA LTLPALLLVTHQVPAEAAVSRAMAEIT ALESLEMGFPRGRAEKALALTGNQIE AAMDWLMEHEDDPDVDEPLETPLGHILA GREPTFSEQGGPLKDLVLAAGEGKPAIS */EEERQEQTKRMFGAWLAQKGSREIRE EREGREVALERERQRRRQGGQELSAARQ RLQED\KMRR\AAAEERRREKAEELAAAR QVRREKIERDKAERAKKYGGSVGSQPPQ VVAPEPGPVPSSPISQEPPTKGEDDKCRI QVRLPRWDPH*PQTFRAREQLAAVRLAY VELHRGEELAGGGARDPVQIASVAFPRR AFLRSLTMERPLQELGMAAKTRNQD
2102	10153	A	3033	2	565
					IHFQQEHWPSQLLLRESLEDMMMLHSALG LCLLLVTVSSNLAIAIKKEKRPPQPLSRG WGDDITGVQTYEESLLCSKK*GSH*WV IHHLGDCQYSQALKKVFAQNEEIQEMA QNKFIMLNLMHETTDKNLSPDGGQYVPRI MFVDPSLTVRADIAGRYSNRLTYTEPRD LPLLIENMKKALRLIQSEL
2103	10154	A	3034	73	262
2104	10155	A	3035	29	867
					PLEGIADNRFPGETSTLPATFCSPSAPEL ASMSVVPNRSQTGWPRGVTQFGNKYI QQTPLATLERTINLYPLTMYTFGTRAP LTRRTSSVAARFQRIEGKNFDKIGMRRT VEGVLIVHEHRLTPWCYLLQLGTNFLP NYLGWLNLTPEGEDEVGLKTA**PEIPG SVQDGVLAQDWGPLTDCHWVTWWRP KFLNPPSVSHIFPAHITKPKE/HIRKLFPG SSLQEKALVLQFPKKFTSW*PATPLFELY DNAIPGYGPIISSLPQLSRFNFIYN
2105	10156	A	3036	2	817
					RARIPKMAAVKDSCG*GEMATGNRRIL HLGIPEAVFVYFSY*RKMYHYFMKQP GNETADTVLKKLDEQYQKYFMELNL AQKKRRLKGQIPAEIKQTEILKYMQKKK EASTNFNGRPRFFAGRLTYLQKLSVPPT R*RG/CLGLGANVMLEYDIDEAQVALLGK DLASTATKILDSRGGRTLTFLARDQFTTTE VNMARGLLIGDVKKEGKNDSTKNKA LMLGQFKNVGLVFPNMFIFYPFIPYRFD INFGMFNQPRNFKEKINTILFIY
2106	10157	A	3037	3	468
					ERIMEWHRHTMTECSAQEPKSHDIYLRIL LVKLYRFLARRTNSTFNQVVLKRLFMSR TNRPPLSLSRMIRKMKLPGRENTAVVV GTITDDVRVQEVPKLKVCALRVTSRARS RILRAGGKILTFDQLALD/SPYVRSKGRK FERARCRRARRGYKN
2107	10158	A	3038	1	693

2108	10159	A	3039	105	756	VDHPPYKRTEKVRAQRSPKSQYIYLSLL LKLYRFSGPEEPNSNIQTRVVLKRLFMSP HQTGPPLSLSRMIRKMKLSWPGKORRA VVC/VGPITD/DVRGSRYPKLVCTAP *PSRAPQAAILKAGGKILTFDQLALGLP LKGCCTVLLSGPSKGRKVYRHRFRQRP QEPPHKPHQNPTFRSKGRKFERARGRR ASRGYKKLTLDPITLLYKKIFA
2109	10160	A	304	444	920	NPSLRCWLGLSPGKLAGARGRGTVHV GPEGPCTHSTSTKMAKRHPEVSTGGGG KAP*/SQGIRGQAGQG/GARSGVAGNG GGARSRLRLSPAASATA/SGPEGSIGP GSGGRSRVPVEAAPPCPRSDVVPARGA AAAGPGGTWLPASQVGPSPGWG
2110	10161	A	3040	301	390	
2111	10162	A	3041	1	737	MWFAYSPTFCHDWKLPESAEAKRMP ALCFLYSLQHPLCEDGVCAHEAGVWGI GGLIAYVKGYEEVSQKFTSIRRVRGDNY CALRATLFQAMSQAVGLPPWLQDPELM LVVFVAILLHSHLECREPLLIPLSLYMGA LVRCTTLCGLYYKNIHDIIPDRSGPELGG DATIRKMLSFWWPLALILATQIRSRPIVN LFVSRDLGGSSAATEAVAILTATYPVGH MPYGWLTEIRAVYPAFDKNNPSNKLVT SNTVTAHHKKFTFVCMALSLTLKDSVQ KPDISLTGRLVQTLPTMRHRQGESKDV APLASWLSEPSTSSEASQTSSKLTINSQG EGKAKQKLECGTSLIVLRSCENQERIK AAEKRNRSWTTLCGLGAWRPLLFELPVI VQTPDQTNRFQFRYPAKTQSGLCSEFFHS FDLLTLEAFVKVWFPGLLILLCFVMFW TPNVSEKILIDIIGVDFAFELCVVPLRIFS FFPVPTVRAHLTGWL/QGPGAAGCFC SHFASQSPGMPGAPHPDPLLHVGRTCA LHHPVPGLLQEHRSRHP*QKWPGAGGR CNNKKDAELLVAFGSNSGHTENQSAYC QPLCFPGPWWQFCSHRGSGDFDSHIPCG SHAIRLVDGNPCCVSCFRQE
2112	10163	A	3042	889	1577	RGKKNVTVLKKIRSQFTIRESFDLRYKEHI PLPKLEFPLDTKVFGLLGEDMVCTGPTG VALKGPWKYIGIIDEKDLVNFYSYQKL VFRTSWSTWLPGRPRVLLRDCSLKTPKP AAQAQEP TVHLRPRRQGFSGSMRSLID WVSLTHSDGDVIVPIVLSNERYHWPVL GWVGGVDCDEFRRVVLGEARLHLDGV AHQH*GKKEPFTCSKTTSVSHLVEVVP QKLSWVI
2113	10164	A	3044	2188	2706	RESIDQGFNSFFFLRRSLDSVTQAGVQ WHDLSLQPPPPGFK*K*FSCLSLLS*DY RSPATMPGLIFLYFFFLVETGGFTVLAR MVSIS*PQ/CDPPASASQISAGIQKNSFFFL ETRVSAFVAQAGVQWCDLGSPQPPPPG VQPFSCLSLPSSWDYRRTPPGPANFAVC N
2114	10165	A	3045	33	198	
2115	10166	B	3046	6	125	MAGQFRIYLWDPILLISQIVLMQTVYYG SLGLWLALVDGL*
2116	10167	A	3047	1	110	
2117	10168	A	3048	260	798	RPGHAQTLGSPSLALGMAGQFRSYVWD PLLISQIVLMQTVYYGSLGLWLA/VVD GLLRISPSLDQMFDAILGFS/TPFQGRLS MMSFILNTLNSALGLLYFIRRGKQCLDF TVTVHFFHLLGLLSNSSPFPSPGG*TLV GLGPKPVVALHSLAVIGEYLCMRTELKE IPLNSAPKSNV

2118	10169	B	3049	1	528	MRRQDCPNPMKKIRSSSPVQQERVSSLY FQSARGGLGVDVVSALGTVTHVSPSSAR VAMAMSAERGCSMGHIMGYRGVGRFT RGNGDHARVGYKGNPPEVSISGYDDNW YLGRTDATLSCDVRSNPEPTGYDWSTTS GTFPTSAPVRAPSWSTQWTVCSIHRL HITNAVDGPR*
2119	10170	A	305	504	935	AYLQSSMIAQSRATRTGLATWHQHKL DRHFRLSSRHPLFETCSSPPCKRWGEKS HFRRACKEGRESAPCGIPRPRFKVHTPRG KLRRMRPVPRRFGGSRLGPRSRKRRTK QPR*PAAPRDSFGAPAAPPTPRPSAARNG GG
2120	10171	A	3050	31	206	GSSCRSRLVVVLSIVLEGPAAPGDPQT SPSALDKLKEFGNTLEDKARELSRIKQS ELSAKMRVPLRPRHEALPVAPGPGGSV DRLGRPSPPRPPDVSQLG*AEGVWK HTGGQGSQTHQPHQTE
2121	10172	A	3051	21	353	SAAGTGPEPEPEPHRLLNRPADRPQSG PRASGRAQSPGSPMARAAALLPSRSPPT PLLWPLLLLLLLETGAQDVRVQVLPEVR GQLGGTVELPCHLLPPVPGLYISLVTWQ RPDAPANHQNVAAAFHPKMGPSFSPKPG SERLSFVSAKQSTGQDTEAELQDATLAL HGLTVEDEGNYTCEFATFPKGSVRGMT WLRVIAKPKNQAEAQKVTFSDPTTVAL CISKEGRPPARISWLSSLDWEAKETQVSG TLAGTVTVTSRFTLVPSGRADGVTVTCK VEHESFEAPALIPVTLVRYPEVSISGYD DNWYLGRTDATLSCDVRSNPEPTGYDW STTSGTFPTSAVAQGSQLVHHAVDLAFN TTFVCTSQPNPWALARAQVIFVRETPQ ALAPRCGPAGVGGRGGDTAGAAASGW GVLGLHPCMRVRRRRKSPGGAGGGASG DGGFYDPKASGVGKWGPRLLDTSSPWS HGTRWQG*GGGGGGREGRRPHVASTP STSRMTWSPSWTAPSSHGG/PVYV*PGPP WPGPLPSCRRDRRRRCCGRCCCCCSW KPEPRMCEFKCYPRCEASSGAPWSCRAT CCHFLDCTSPW
2122	10173	A	3052	1	1620	MARAAALLPSRSPPTLLWPLLLLLLLET GAQDVRVQVLPEVRGQLGGTVELPCHL LPPVPGLYISLVTWQRPDAPANHQNVAA FHPKMGPSFSPKPGSERLSFVSAKQSTG QDTEAELQDATLALHGLTVEDEGNYTC EFATFPKGSVRGMTWLRVIAKPKNQAE AQKVTFSDPTTVALCISKEGRPPARISW LSSLDWEAKETQVSGTLAGTVTVTSRFT LVPSGRADGVTVTCKVEHESFEAPALIP VTLVRYPEVAISGYDDNWDLGRTDAT LSCDVRSNPEPTGYDWSTTSGTFPTSAP AQGSQLVHHAVDLAFNTTFVCTVTNAV MGRAEQVICVRETPNTAGAGPTGGIIGGI IAAHATAVAATGILICRQQRKEQTLQGA EDEDLEGPPSYKPPTPKAKLEAQEMPS HLFTLGA*EHSPLKTPYFDAGASCETE MPRYHELPTLEERSGPLHPGATSLGSP VPPGPAVEDVSLDLEDEEGEEEEEYLD VNIPIYDALSYSSPSDSYQKGFMVSRAM YV

2123	10174	A	3053	408	2708	DPSSGHWLHWSIRPPAAGWSPRSGRAA ARAQSPRRREHGAPGRTGPGGGPRLLLL AVLLAAHPGAQDVRVQVLEVRGQLGG TVELPCHLLPPVPGLYISLVTWQRPDAPA NHQNVAAFHPKMGPSFSPKPGSERLSF VSAKQSTGQDTEAELQDATLALHGLTVE DEGNYTCEFATFPKGSVRGMTWLRVIA KPKNQAEAQKVTFSDPTTVALCISKEG RPPARISWLSSLDWEAKETQVSGTLAGT VTVTSRFTLVPSGRADGVTVTCKVEHES FEEPALIPVTLVRYPAIEVSISGYDDNW YLGRTDAT/L*ACDVRSNPEPTGYDWS TTSGETFPTSAVAQGSQQLVIHAVN/SVLFN TTFVICTVTNA\VGIGAGAE\QVIFVRETP RASPRDVGPLVWGAVGGTLLVLLLAG GSLAFILLRVRRRRKSPGGAGGGASGDG GFYDPKAQVLGNGDPVFWTPVVPGPME PDGKDEEEEEEEKAEKGLMLPPPAALE DDMESQLDGLISRRVYTPSPVPGSA GAAAVACTDPVPSSGVHGHNDHKNSSS MFRMKALAQSPYKTPNTAGAGATGGII GGIIAAIIATAVAATGILICQQRKEQTLQ GAEEDLEGPSPYKPPTPAKLEAQEM PSQLFTLGASEHSPLKTPYFDAGASCTEQ VGAHGKTKEMPRYHELPTLEERSGPLHP GATSLGSPVPPGPPAVEDVSLDLEDEE GEEEEYLDKINPTDALSYSSPSDSYQG KGFVMSRAMYV
2124	10175	A	3054	115	467	
2125	10176	A	3055	315	431	
2126	10177	A	3056	53	442	PRVMAM/ATKGGTVKAASGFNAMEDA QTLRKAMKGLGTDEDAIISVLA YRNTAQ RQEIRTAYKSTIGRDLIDDLKSELGNFE QGAGTDEGCLIEILASRTPEIRRIISQTYQ QQYGRSLAEDDIRSDTSF
2127	10178	A	3057	186	1268	PRDMAMATIGGTVKAASGFNAMEDAHT LRKAMKGLGTDENAIISVLA YRNTAQR EIRTAYKSTIGRDLIDDLKSEL\SGNFEQ VIVGMKMPT*RDDV\QELRRAMKGAGT DEG\CLIEILASRTPEIRRIISQTYQQYG RSLEDDIRS\DTSMFKRVLVSLSAGGR DEGNYLDDALVRQDAQDL YEAGEKKW GTDEVKFL\TVLCSPEPKITLLHVFEYQ KDIHRRIEPEVLNSETSGIFWKIALGLA VKCMRNKSA YFAEKL\YKSMKGLGTD DNTLIRVMVSSSQKMD\MLDIPAHTSKR LLWKSPLY\WFIKNRVATSGDYRK\VLLV LCGREMIKIKIPGRDREGSSTLLNFF
2128	10179	A	3058	1	4608	
2129	10180	A	3059	1	465	
2130	10181	A	306	163	387	IRQKKAIFVIVAFKRRGLRKTDTYYYAR GG*FVKNKYRGFIELGTTCKGYFLFCTL AIIDPSDSNIISMPEQT
2131	10182	B	3060	109	192	GSSSNEYLYERFGLLA VPSIRSLSVQSK*
2132	10183	A	3061	1	1542	
2133	10184	A	3062	1	4226	EAVLCSSRGRPDSSMPDCCRNAALEARS CQSMTSLFSNTVSPTQDGTSSLPRRQSSF AKPPLRALYDLLIAMEGGVVESTPLG TSRSGFASGTALFWLGDNGKAASPPGVS VSSLENEDNTQCNRLQGYREAAVPD WTQDLALCLLPTLQSLKARTAPHL CVPS SCYKAWYTLAVSKVSGMVEGKA WIII LLAASTHALLQRPQEGDITPLAGSRAAA VSCQARPFSTFSGLMHSSGPVGRHRQLIL VLE

2134	10185	A	3063	2	4195	ALDFPGRFRPTASFIWASVLFETIRHEA EVSTDYKLSLFDLQTSSYQALQRLVSL GHHDEALAVAERGRTRAFADLLVERQT GQQSDPYSPVTIDQILEMVNGQRLVL YYSLAAGYLYSWLLAPGAGIVKFHEHY LGENTVENSDDFQASSSVTLPTATGSALE QHIAVREALGVESHYSRACASSETESEA GDIMDQQFEEMNNKLSVTDPTGFLRM VRRNNLFNRSCQSMSTLFSNTVSPTQDG TSS
2135	10186	A	3064	8	665	SAQMAVTTADPRVRPRVRTQLCSLATSN RHAWCILSPEEKSAVTALWGK\NVNDE\ VGGKALGRLL\VVLPVPDRFFE\SGDL STPDAVNGQTPKVKVSWSRKCLGAIFS DGPFTWDNLQGSPLPTLK*ACTC*QAC TWD*RTFRLPGGNVAGFVVAWAHSL GKEFQPHQCKLA*SRKLVGLVLAKCPW PHKYHLKLAFLAVQFLFKGFLWSLKTN Y
2136	10187	A	3065	8	531	SAQMAVTTADPRVRPRVRTQLCSLASLI QTRMVHLTPVEKSAVTALWGK\NVNDE\ VGGKALGRLL\VVYPWTQRFESFGDL S\TP*SLLRANP*GERLHGKKSASVPFSDG LAHL\DN\KGTF\A\TEVSLHCDK\LHRG SLKNFRLLGQRAWSV\AGPIHFWEKNF NPTSCRLA
2137	10188	A	3066	91	951	TPHFHQGTGKRAAWPTWFNPAGPGIFLR R*GPGKAQRRRSIAP\PAVGFPSPGPIVRC PHGFGYPHERLRAGPRLPALRKLVRAGI HKEGWPGPIG\SVDPKPDQVPSPLQVA NVQRLKKYASNFI\FPQRSRAPKKGDR SAEELKLGHPSLTGP\VPVRNVYKKE KARVITEEEKNF\KAFASLRMARANAPAL RHTGQKEPREAAEQGC*KAHNKALPGD LESVGQSCWVSTWCVSWEQLGLGWGFT AVTSSCQGIWGF\LERQSKPWIMLNLVL KPCWLF
2138	10189	A	3067	1	1603	MKLLKSILLTILLDFSLHTCASLVPALQW ILLLLITVLVVEGIAVAQKTQDQGNIGIK HIPATQCGIWVRTSNGGHFASPNYPDSY PPNKECIYILEAAPRQRIELTFDEHYIIEP SFECRFDHLEVRDGPFGFSPLIDRYCGVK SPPLIRSTGRFMWIKFSSDEELEGLGISEQ IIPFIPDPDFTYLGRYFKFPS/HDCQFE/HL RELDGDSAALVR*NKRRKQNGQAFD\C IWDL*/MPFQKLKIYLRFLDYQMEHSNEC KRNFAVAYDGSSSIENLKAKFCSTVAND VMLKTGIGVIRMWADEGSRLSRFRMLFT SFGGASPAQAALSFCHSNMCINNSLVCN GVQNCAYPWDENHCKEKKAGVFEQIT KTHGTIIGITS\GIVLVLLIISILVQVKQPRK KVMACKTAFNKTGFQEVFDPPHYELFSL RDKEISADLADLSEELDNYQKMRRSSTA SRCIHDHHCQSQAASSVKQSRTNLSSMEL PFRNDFAQPQPMKTFNSTFFKSSYTFKQ GHECPEQGP\GKDRVMGGRFPC
2139	10190	A	3068	163	392	HQELLFLLLSSRRLSRSPSEGSRTM\AL GEKKIGFPSLLWCFPPSAAGASSQIKWQ PCGSGAPPLPGCSGKRAA
2140	10191	A	3069	190	352	HQELLFLLLSSRRLSRSPSEGSRTMVL EKRK*GFHPHSC\RAWRLKVCEGKS
2141	10192	A	307	131	395	LWAARAAVLTSLPTGSPSAALSGCCRP GGQGRYSVAACRGRAAGGVAPVPAHT* AAAPLGHFSFLLGIVSPAPEPHFELGHYY SGLS

2142	10193	A	3070	1	794	MSRERPPGTDIPRNLFSFIAAL/DGARLLP* PAAQPRGGAGGGARRGRDAVRGPIPRSR TESGP/SGPDLHQPEAAGPGRP/CSRSPT RKRVRFADALGLELAVVRFRPGELPRV PRHVQIQLQRDALRHFAPCQPRARGLQE ARAALPASEPGFAARLLTQRICLERAEA GPLGVAGSARVVDLAYEKRAPAAYAGP APPPPRADRFARLPAPPIGGALLFALRY RVTGHEFWDNNGGRDYALRGPEHPGSG GAPEPQGWIHFI
2143	10194	A	3071	133	1079	ARRILQNFSLYPSGEDLKGYKVIQAQTA FSANPANPAILTEASAPIPHDGNLYPRLY PELSQYMGLSLNEEENRANVAVVSGAP LQGQLVARPSSINYMGGLLLTG*LMLGI RRSR/II*GKGFREVILCKDQDGKVLRL KSIDNGVIFVLVQANSSSLIGLV*EFGDQ VLQINGENCAGWSSDKAPRWSNRPF*E KITMTIRDRPFERTITMHKDSGHVGFIF KNGKITSIVKDSSAARNGLLTGPNLCGN SMGQNVIGLKDSQIADILSTSGTVGTITI MPAFIFEHIIKRMAPSIMKSLMDHTIPEV
2144	10195	A	3072	242	512	AWVPCLLRHCDREPAPRGRTSPSLWPQE GT/P/GQDRGGGPWLGGPSLQ*QRSHGG HLPAPQGGLGGPHDNSSFRPGRGGAGRG QGIEQGSK
2145	10196	A	3079	184	561	GQRGRGLRKSGASGAGMMEHTHTEA HPHTWVCTSTHTCTHTLGD TDYMLHV CVSIHMYV/CPHT/MSLALGMSAHTLHM FSHTKLLSR*HAGRHPMPKQVTCTYVP TPSPTHVLGHACGCRPHAS
2146	10197	A	308	327	598	GPARNPAQCRWAGTAGGPSTLSAAAGP GAKPLMPGAA/GAGQAGWLL*VQGPPSP RPPGTLAGPQARHTALVPARASPSTPPC KLRGGLRP
2147	10198	A	3080	63	426	GLLFPOHCPAHRPRRCLRPRSSAGRGSA PALSRPSALCHLCLPRSSLSAPRSVSPAA TPHH*ALQGLVEPWGPLHSAPLHR*APA SGPAGNVRAWPACRGWCLSRPPLPGTV GEGAASRAF
2148	10199	A	3081	1	588	
2149	10200	A	3082	81	289	
2150	10201	A	3083	3	387	
2151	10202	A	3084	2	290	RPPGPSRSPPAPPPSSRRPLPKMACCACC ARVTAGPVPLGWGVGGPGQSRSPVTRR ARPPSGLLGFEARPLVPWTSRSPFRCQCT ACGHLVEFVL
2152	10203	A	3085	2099	5383	VIQTSLSPATNDRGHFSLDNWTGKP VHSMVAHLDAVTCLAVDPNGAFLMSG HDCSLRLWSLDNKTCVQEITAHKKHEE AIHAVACHPSKALIASAGADALAKAHKE QGGKRLHLPVEDDGFQAQPPCWEEVP QGTNAQFLGCKGLCPSPAPGSEHTRKD GGRCLDTQDMAAFCWDSHLPFRKKGAE LQSPPLLPQIPAPGSGVSFHIQGLTREF VLLPAASELAHVQLACSIVDQKRPRVQ VPRP
2153	10204	A	3086	2	426	EDGSLATFLGRRQFAFAEMRHSKRTHCP DWDSRESWGHESYRGSHKRKRSHSST QENRHCRPHHQFKESD/CCSMCIPLEASH SVEEDTHPSHYLEARS LNERDYDRRYV DEYRNDYCEGYVPRHYHRDIESGYRIHC SRS

2154	10205	A	3087	39	1514	GDGAAAILWGVCRSGRGKTA VWRHFS AEGPFAFAEMRHSKRTHCPDWGSIESIW GHESYRGSHKRTRISHSRSQENRHCKPH HQFKESDCHYLEARSLNERDYRDRRYV DEYRNDYCEGYVPRHYHRDIESGYRIHC SKSSVRSRRSSPKRKRNRHCSSHQSRSM KSVDTLGEGAFGKVVECIDHGM DGMHV AVKIVKNVGRYREAAARSEIQVLEHLNST DPNSVFRVCVMLEWFDHGHVCIVFEL LGLITYDFIKENSFLPFQIDHIRQMAYQIC QSINFLHHNKLTHIDLKPENILFVKSDYV VKYNSKMKRDERTLKNTDIKVVDGSA TYDDEHHSTLVSTRHYRAPEVILALGWS QPCDVWSIGCILIELYPWGSQFFRLQ**K EHLAMMERNIRTPYPQHMIQKTRKRKY FHP*PSLDWDEHSSC/AGRYVRRRCKPL KEFMLCHDEEHEKLFDLVRRMLEYDPT QRITLDEALQHPPFDLLKKK
2155	10206	A	3088	2	175	
2156	10207	A	3089	1	534	
2157	10208	A	309	1	630	
2158	10209	A	3090	1	325	LEKERDFY/FGKLR/NIELICQENEGENAP VLQRIVDILYATDEGFVIPDEGGPQEEQE EYYSLGPAEQHGYSLLQIMCLTVKYSLL LSLEDLSVSFHKQKVPLLKVPVF
2159	10210	A	3091	3	930	SSRGRAGGVWRFERDEDGTGAGCGQW TRFCREPKMAVNVYSTSVTSDNLSRHD MLA WINESLQLNLTKEQLCSGAAYCQ FMDMLFPGSIALKKVKFQAKLEHEYIQ NFKILQAGFKRMGVDKIISVDKLLKGK FQDNFEFVQWFKKFFDANYDGKDYDPV AARVQGGQETA VAPSLVAPALNKP KPL TSSSAAPQRIPASTORTAAAPKGWALGV VRKNPGVGNGDDEAAELMQGQRI*NL LFEDLGGKERDFYFGKLRNIELICQENEG ENDPVLQRIVDILYATDEGFVILDEGGPQ EEQEEY
2160	10211	A	3093	337	903	CNRNTSTLTRTCTNVCINTPRPAPLLA/P QATLHFQFP*/PPLPL**QPQALSATRLSL/ VCHGSGRLRLPLLAAPGWLPSLGLPSL FSCRGRVLLC*PGWSCYLGLKLSSHGL PKCWDDRPPKPPSPASFEWAPTRPNLPQ HGTQSQCFLSVGEAPRPHSGSAYYTNC LQCSRPCSERTRRLGVLLPK
2161	10212	C	3094	821	1051	MAMELINNKHWPSVRALCWNTVLAYVI GEGVNSGRSCLAQTLVTFRKGSFRD WVLGPAPGGNGALRLFRKILFC*
2162	10213	A	3095	1	594	
2163	10214	A	3096	3	761	TSRGRVGTQAGEPRDLRPPPCSSPLRV AVVCLEQPERGAWEAHNIPQNGDSAV RSFGTGTHTVKLPGPAPDNPVYDFKTT YDQMYNDLLRKDKIELFTQNGILHIAGR NKRIKPGPERFQNCDFDLITCEERV YDRVGWKI*ISRAEQGDLPSPVHVVNLDI QDNHEEATLG/ARFLICEVCQCIQHTED MAENEIDELLQEFEEKSGRTFLHTVACFIL FSFLDICF
2164	10215	C	3097	129	314	
2165	10216	A	3098	1	1434	
2166	10217	A	3099	1	831	
2167	10218	A	31	1	365	FFFLLLILFLLLIQYHYIFTLLWLRLLV LTGSI*C*KCKITMNST*IE/TVFKDYEH LYVCKLKNLEKTDKVLTIHNLRLNQ*E PEVLTRAKMYKIYNDIE

2168	10219	A	310	101	520	RLQKPGCLIWTRGST*CPLTLLLP SRGA GLGTC/KPAMPEPPTTHSGTCAARASPT STTPCST/CAQSHRPGRNKQPKG*GMRA HGAGLAGSSTCSPGVGSTG*SQGL
2169	10220	A	3100	1	1251	
2170	10221	A	3101	1	5355	MAGWLRAWLDGWL TGWLAGCMSEW MMDGWM D G W I D G W M D G W N P I V P E T Q V L H E E I E L P G S N V K L R Y L S S R T A G Y K S L L K I T M T Q S T V P L N L I R V H L M V A V E G H L F Q K S F Q A S P N L A Y T F I W D K T D A Y G Q R V Y G L S D A V V S V G F E Y E T C P S L I L W E K R T A L L Q G F E L D P S N L G G W S L D K H H I L N V K S G I L H K G T G E N Q F L T Q Q P A I T S I M G N G R R R S I S C P S C N G L A E G N K L L A P V A L A V G I D G S L Y V G D F N Y I R
2171	10222	A	3102	205	393	
2172	10223	A	3103	2	158	
2173	10224	A	3104	1	1923	MRPPPALALAGLC LLALPAAAASYFGRQ SRSLMP SRDPHAGALSAAILASGEPSLPR TPSPPSAFALRSGDREGWVDGWDGLFPV SGQRIVRVQGEWGKPRTSFAFDYNTKCF GILIREYANIRRAGNIYVFGPLMND C P Q Q MASSLQAKTWAFAHQCSAAKGQLHTE LLHEDALKKWTSPAMGWERSRSHDKPR RLSRPLVPPRFP RPACAGSSRVRRGLAD QKGQQFPTQSRLLPTGSASFTPDRGCAES WCLRPRALIGCSLTSSNPAAPRWAREGG GCGWRCSADKPESHFSQSQVDFVPTIGGV APPLHGRGQTSSAPLLMEPHLLGLLLG LLGGTRVLAGYPIWWCWAQGC VAVNI FADIYLWVRAILLHL YIHVILYAGKWSQ WAMGAGEKVL RSEAE TRFFSVRQPVPR EHSGYPRQVHEIQSCMGR LDTADKQSG HIVENEIQASIDQIFSRLELLEILSSKEPPN KRQNGR/LFRVNSLKYDVQHLQTALRN FQHRRHAREQQERQRERAF C / R S K P F T T *TTLDTITNWDRHLQF*LP SLPRKFHN GHGIDLILDGHNNLDGLRTQRLTLKGT QKKILDIANMLGLSNTVMRLIEKRAFQD KYFMIGGM L L T C V V M F L V V Q Y L T
2174	10225	A	3105	1	566	FSGRPT RPRPGAVACRAGDMDPLFQQTH KQVHEIQSCMGRLE TADKQSVHIVENEI QASIDQIFSRLELLEILSSKEPPNKRQNAK LRVDQLKYDVQHLQTALRN FQHRRHAR EQRRRRQRIEELLSRTFTTINGTQKKDPLTL PNMLGLSNTVMRLIEKR/AF PQDKYFMI GGHPA*PLWALFLWFQYRT
2175	10226	A	3106	53	151	
2176	10227	A	3107	432	649	GSHPPAQAGVQVCV CSTLQP/LNS*SSNL SLHSCWDYKFKLVCICKGDGKEFLHMHI LKKDVT L T E K L I P R Y V
2177	10228	A	3108	2	677	PPSFQPQSDGRGDASGRNAAMAAQGE P QLVLVG D G G T G K T T F V K R H L T G E F E K K YVATLGVEVHPLVFHTNRRPIKFN VWD TARQEKFGGLRDGY Y I Q A Q C A I I M F D V T SRVTYKNVPNWHRDLVRVCENIPVL CG NKVDIKDRKVKAKSIVFHRKKNLQYYHI CAKSNNYFEKPFLWLARKLIGDPNLEF/V AMPALAPPEVMDPAFASTYEH D L E V A QTAL
2178	10229	A	3109	1	549	

2179	10230	A	311	411	640	ADIDSRGPKMSLQSSS*SRGSWMSGN*W SFSSDPTYSGSGGSAPSP IPTQGAEECGR TAPGLAGSSTCSPGVGSTR*SHFRPTHPS LENLEDIALTNVLQNR FVRAEPASLKSPV IALLCMSDLTVGTTVTQLQHLNTMGVIG SQDGRDQVAALNHQKQGDLPFPRVT LWRKGIDQTFWGLLNTGSELTIPGDPK CRCSPPVKVEAHGCQVINGVLAQIQLTV GLVGPRPVSTTQGAEECGRTAPGLAGS STCSPGVGSTR
2180	10231	A	3110	2	822	APALAPASAASPAFEFTLPSPFQPSDGR GDASGRNAAMAAQGEPOVQFKLVLVG DGGTGKTTFKRHLTGEFEKKYVATLG VEVHPLVFHTNRGPIKFNVDTAWPWR NSGGLRDGLYIPSPRVPIIMFDVTSRVT YKWNVPNWALGDLVTSV/CENIPHLCCVA NKVVDIKDRKVKAKSIVFHRKENFQYY WISAQKVPTNLKKPFLWALLGSLMGDP* LWNLLPMLLSPPPR/EVVMPEQLWPAT SMKHDLAEVASDNCLPPDEDDDPVKK
2181	10232	A	3111	116	599	PQVISLPKCCDCRCEPLHLAAEKSLPTVR ETTKVPGEAKSEFHKNKMDGRGGKPMG GCEGPDAMYVKLISSDGHEFIVKRDHG LTSGTE*KPMLSGPGAQFAGGKTHEVN FR/EIPSHVAIRKVCNVFFTYKV/RATPNS SHPRFPEFPNLAPGNLHWELA
2182	10233	A	3112	84	348	KYTIKTKTVLKKSGIFSTCPKPKSCYDFV PLNAGPIPPKSILGTNGPHTHTLEMLD*RL NKPTPISPQRSPLTQVGHR*TRPTRRRPR T
2183	10234	A	3113	122	518	KSLEFFPPALSPSPALILCHLMQAPYHLK VSWEPTDPPT/ALEMLD*RLPLPHA*HKG ETHTCGPLSDHTFKAPPDPLQICLLSHQG PASPSQQTHPYQPSEVTADSGGTQVDKA NQEEATNTKHHEQEEEQD
2184	10235	A	3114	1	1452	MSAYCLQLGGLQALLALTQTPGHRDSL DAQPAAVLVCGWPWLASFERTIVGHK EWTIKDKLKNKFKDEFDIVSLPCTLGSH QPQDPMLKLPWSITYGRCLAPGDHTVSL VIKLVESASLSLAVSNMMLSDMIRWMPAG CGRCLLGLQSESRVCGQCVGMEQVCR VSGPHIRWIPQQLHSCLFFLYSPYPLEP SSNTSFICPHSRTYNGSLLSCIPNSAAAAA PPTPQATSFSPCSPKQRLPTGRVVEGSD HRVHEARLPGNHSRSGVDSAPPTLAHA GLLLTEKTLKENGRRAEALRVGVHWR HGTSQGPGRTLWAEKVKPHFRTRGQVY DASSAPVTEHTATELPAGNQSQPGLQE GGLEGTVVTLVSWKVT/MVSRRC*CRY GQRPH/HHLKVLGNQR/PTHLEMLD*RL PLPQRLTPKGKHTPVVPLLNQPFKAPPD PLQICLLSHQGPASPSQQTHPYQPSEVTA DSRWDR
2185	10236	A	3115	1	414	

2186	10237	A	3116	112	1655	QEH LQRASPRLLQLLPPLPPPPPPAFGGS LSSLGSRMSRQVVRSSKFRHVFGQPAK ADQCYEDVRVSQTTWDSGFWC/SVNP* VLWALICEASGGGAFLVLPLGKTGRVDK NAPT VRR*HS/APVLDIAWCPHNDNVIA/ SGSED\CTVMVWEIPDGGMLPLPREPVV TLEGHTKRVGIVAWHTTAQNVLLSAGC DNVIMVWDVGPAGAAMLTLGPEGPPDA NYRGDWEPDGGICTSCRDKRVRIEPR KGT VVAEKDRPHEGTRPVRAVFVSEGKI LTTGFSRMSERQVALWDTKHLEESPVS/ LRKLHTRNGVPVAFFGPD TNIVYLRGK GSGPIRVFEITSEAPFLHYLSMFSSKES QRGHGLHGPNRGLEVNKCEIAGFYKLH DGR/CVSPMPKPVPRKSDL\FQEDLGPTQ PQGPDPCLHGLKEWLGGRDAGPLPSSPL KDG YVPPKSREL RVNRGLDPGRRRVA PEASGTPSSDAVSRLEEEMRKLQATVQE LQKRLDRLEETVQAKL
2187	10238	A	312	375	519	GMLFPKQITPQSI*VETNAKNV*GGDIAS FMGSTHALFEFPDSHSA
2188	10239	A	3122	200	469	RGGGAGPLTGHHVGLLGIAHAAADQFD RLAAGICGHSHPHPLPGLHCCAPLWS GPQQN*PTADVAESLQLVTVHQSETEG EFTECNN
2189	10240	A	3123	1	2520	
2190	10241	A	3124	1	1950	
2191	10242	A	3125	1249	2166	
2192	10243	A	3126	1	2424	MVAIHSALLESSLLFQEESQLLYLVTVE NLNFMAIGFTDGSVTLNKGDITRDRHSK TQILHKGNYPTGLAFRQAGKTTHLFVV TTENVQDLQFIVAGDEC VYLYQPDERDC RDDHVFSLYFMIPFFFTL/VIALPQLVPIT GVCGRYLLLCWQTFAVVGILGHFSKT MLLFFMPQVFNFYSLPQLLHIIPCPRHRI PRLNIKTGKLEMSYSKFKTKSLSLGTFI LKVAESLQLVTVHQSETEGFEFTECNNM TLINLLL/QSPWAHT*EKPHIAPAAAAAFS FLCDHWHWPGRFLPSADY*LDFTYGFLLQ ATLSLSIPSLQPIGTIGKLEPSYVIRKFLD AQRIHNLTAYLQTLHRQSLANADHTLL LNCYTKLKDSSKLEEFIKKSESEVHFDV ETAIKVL RQAGYYSHALYLAENHAHHE WYLKIQLEDIKNYQEALRYIGKLPEQA ESNMKRYGKILMHHIPEQTTQLLGLCT DYRPSLEGRSDREAPGCRANSEEFIFA NNPRELKAFLEHMSEVQPDSPQGIYDTL LELRLQNWAEKDPQVKEKLHAEAISLL KSGRFCDVFDKAWFQQIMHYHMQHEQ YRQVISVCERHGEQDPSLWEQALSYFAR KEEDCKEYVA AVLKHIEKNLMPPLL VQTLAHNSTATLSVIRDYLVQKLQKQSQ QIAQDELVRVRYREETTRIRQEIQLKAS PKIFQTKCSICNSALELPSVHFLCGHSF HQHCFESYSESDADCPTCLPENRKVMD MIRAQEQKRDLDQFQHQQLKCSNDSFS VIADYFGRASPNFIFYV
2193	10244	A	3127	1	411	
2194	10245	A	3128	2	243	
2195	10246	A	3129	1	1176	
2196	10247	A	313	640	975	VPWEAGGMSICFYPRQSEQSHNIVKSK RPVTFQQNRCQKGGGHSADVSSCQCF QCSHREQGFAKPQFSYL*NGGSNSFYLT GCFDNLITSVFCSVRFIHGPKAIKGYH
2197	10248	A	3130	2	496	
2198	10249	A	3131	2211	2568	

2199	10250	A	3132	100	2726	AMMGPLPGPHLLDPLLPSSFCLPPGITY CDSCRGSLVFGDMEGQIWFLPRSLQLTG FQAYKLRVTHLYQLKQHNILASVGEDEE GINPLVKIWNLEKRDGGNPLCTRIFPAIP GTEPTVVVSCLTVHENLNFMAIGFTDGSV TLNKGDIRDRHSKTQILHKGNYPTVGL AFRQAGKTTHLFVVTENVQSYIVSGKD YPRVELDTHGCGLRCSALSDPSQDLQFI VAGDECYVLYQPDERGPCFAFEGHKLIA HWFRGYLIIVSRDRKVS PKSEFTSRDSQS SDKQILNIYDLCNKFIAYSTVFEDVVDVL AEWGSLYVLTRDGRVHALQEKTQTQKL EMLFKKNLFEMAINLAKSQHLSDGLA QIFMQYGDHLYSKGNHDGAVQQYIRTIG KLEPSYVIRKFLDAQRIHNLTAYLQTLHR QSLANADHTLLLCYTKLKDSSKLEEF IKKKSESEVHFDVETAIKVLRQAGYYSH ALDLAENHAHHEWYLKIQLEDIKNYQE ALRYIGKLPFEQAESNMKRYGKILMHHI PEQTTQLLKGLCT*LSAQPRRQR*GGPR LAGPTLRSFIPIFANK/HPRDLKAFLEHMS EVQPDSPQGIYDTLLELRLOQNWAEKDP QVKEKLHAEAISLLKSGRFCDFVDKALD LCQMHDQDGGGLYLEQGLFQQIMHY HMQHEQYPAGQSA/CCERHGEQDPSLW EQALSYFARKKEDCKEYVA AVLKHIEN GNLMPPLL VVQTLAHNSTATLSVIRDYL VQKLQKQSQIAQDELVRVRYREETTRI RQEIQLKASPKIFQKTKCSICNSALELPS VHFLCGHSFHQCFESYSESADACPTCL PENRKVMDMIRAQGT EPRFSMINSQHQL QVLQ
2200	10251	A	3133	11	707	AKMGAYKYIQEVLWRKKQSDVMRFLLR VRCWQYRQLSALHRGSRPHR/RPDKVH RLGYKQAKQGYVIYRIRVRRYI*DSCSR DRRGGRKRPIVSKGATFGKPIVHHGVNQ AKVWFYPFTSVAEERPGRHICGALRVL NSYWVGEDSHLPNFLGVIPHGSHSHKAI R/RNP*PPQWITQTQSHKHREMRGLTSA RPERAVGLAGKGHKFHHTIG/RSRAAW RRRNTLQAPPLPLI
2201	10252	A	3134	1	333	
2202	10253	A	3135	1	1530	
2203	10254	A	3136	1	554	ILSQVRCQAQLAQQAAGGGLSFRAASSL PVSPSLAVSMKAFSPVRSIRKN/SALSDH SLGHSRSKYTPVD/DPDGALLYNMKDCYS VKLKLVPSPPEQRR*ARWEILQHVIRL TSWDLADSPWDLAFPLIVQPGIHRTRG RNQVRSRTPLGPPSTRDISILSFAGLLEFPS ELMSNDSKIALCG
2204	10255	A	3138	3	251	
2205	10256	A	3139	1	1674	
2206	10257	A	314	22	297	GKEKLSHSAWAPKSQNSNSSASSWSN QSQAQPRFKGEDI/ESHLLMGREALS*IQS /GRLVYLQSLST*RFSTASPEQLDTECRL VHSQTL
2207	10258	A	3140	1	648	MSLRKLTIMVEGKGPNIPHACGCRQRS SIKVSLLPAVTSKSESPKEPEQLRKLFIGG LSFETTTDESLRSHFEQRRTLTDCAVMRD PNTKCSKGFGVITYATMEEKYHTVNGH SCEARKALSKQEVASASSSQ/GRSGSGN FGGGHGGGFGGNDNFGHGENFRGHSSF GGSHGGSGYGGSGDDYSGFGNDGSGNFG GGGSYNDFGNYSNQSSNFGPM

2208	10259	A	3141	579	2102	SPKEPEQLRKLFIFGGLSFETIDESLRSHFE QWGTLTDCVVRFGDKAVKQPISLAYL GAVFSECL*K*LIAL*LELCWQRNVLL*F *KLTS*I*G*WETGRTFYKRLV*SFLLPYS KLK*QKLLRSDFLVHLKTLFSGMRDPNT KRSRGFGFVTYATVEEVDAAMNARPHK VDGRVVEPKRAVSREVSFFFFFLLNLL GYVLL*T*DSGVF*TYQNFLFEYRLC*SK PMVFLLLADSQRPGAHLTVKKIYVGGIK EDTEEHLARDYFEQYGKNEVVEIH*LDR IGQWPRKRGFAFVTFDDHDSVDKIVSKY QIVAFSGSTICMAF*TLIPCCIVFFLVQ KYHTVNGHNCEVRKALSKQEMASASS QR/GYACCLIKP*R*L*VTPV*MI*CLNFM S*GRSGSGNFGGGRGGGFGGNDNFGRG GNFSGR/GYVWFIYM*F*LLTIFAMKILQ YGNCIQNVTLSPSHT*NLKFLFTGGFGGS RGGGGYGGSGDGYNGFGNDGKFFRNK
2209	10260	C	3142	42	152	MIXXXXXXXXXXXXXXXXXXVSPSAFA PXXXXKSLG*
2210	10261	A	3143	3164	3255	
2211	10262	A	3144	12	336	SPVQL*F*LFLVFC*LWSWSAVVYLGPL GTPSADAHT/AGLSKTPPHWAARALDD VFSRLTFSSHSLNMELVQDLTASAPMYS STSRDPP/CLGLPKCWDYKREPPRAH
2212	10263	A	3145	602	744	TPASLKIPVE**NTLLAKMVSIS*PRDLPA SASQSAGITGVSHRARC
2213	10264	A	3146	269	483	
2214	10265	A	3147	2	988	KYPPPAVLWFFGFFVLRRLSLSPRLECS GMISAHCKLCLPGSRHSPASASRVAGTT DVHHHAQLI/L/YVFLVETGFHRVSQDGL NLLTRLHLPKCWDYR/R*ATTPGLCFVF* KKRNAREGGRQPPDHKS*FL/VFFFLFLL KWSL/DSVSKAGVQWHGLSSLQAPPRGF TPFSCLSLPSSWDYRRPLPRANFFVFL** VDGGFTVLARMVLIS*PRDLPASASQRAG VTGLSHCAWSEFF/CFKGTGSHSVTHARV QRHNLDSLEA*TPGLN*SSRLSLPSSWD YRSTPPSPANFCSFSRDGVSPC*PGWSRS SDLVIRPPRPKVPGLQA
2215	10266	A	3148	2	608	RDSPPRSLDSGARRDAPPHSPPAECRAH AATWRLKPRPHRPHSLTAPLVHWAGT TEPLSPRPATGTREPRPLHFPATPRSHS/ WRLARPCRQPGPS*DRLFSAGAGPGVVS CLDREEKNAGHWLSSAFALVWLWLTEH WLLLVGFIGYVKAGSVYPGCRACFFW AVLAGLGCLPAVSGIPRERFVWFPRHL VPWLALWE
2216	10267	A	3149	131	453	
2217	10268	A	315	152	437	GLRLCLSRPLTRPGDDSVGGSAMASGAG GVGGGGGGKIR/TRRCHQGPIKPYQQR QQHQVWDPDAAVAVRWGKLGWRGRA VRGPGAPRGADRA
2218	10269	A	3150	403	787	MGRIFLDHIGGTRLFSCANCDTILTNRSE LISTRFTGATGRAFLFNKVVNLQYSEVQ DRVMLTGRHMRDVSICKNCNSKLGW IYGVWPLKDSQRF*GKGRR*SGERIVLVS EEELRALEEHVPPDNS
2219	10270	A	3151	171	382	KNSYKCEECGKIFNEYSHLIARK/RIYT*E KLYQYKDCEKAINVCSHLTQHQRV/H*K KYYKFNYCQKVQKI
2220	10271	A	3152	76	195	VHLLNPQHMLPSTHKQRRITL*KGHAE HLQYYLNNQKLS

2221	10272	A	3153	2	634	WVWESLNREDLWPCFLRRILGGSSYSTA EMVSGQTLQRAHLREAASISLNSQGVW RKSARFSQLERGTTEEQQLOIPDLGQHPS SKAPVFPQVQAHPRFQTPHGHKLQRN QDPGQLO*IPMLGQTPWTQATGPTI*TOP SGRSPCSHYSGMSTDSGFMALHSLTQVS SQPTCRLLEACPWTSSGGLPRISGWTD RQVFGSVDRDLIS
2222	10273	A	3154	275	463	GKFFSLCETLFPSPGVGSFFSSCTMDSSRS LGVGSKNSHFLA*NTDLRLSLCPFPGW KEDIKF
2223	10274	A	3155	5904	7919	FMFINMSVCRLITTKYLLLLFLHESLILLS ENLRKDVEAVTGSPASQTSICIGILLRSA ELALLHPVDQANTLKSPVSESVSPVVP DYLPTENGDFLSSKRKQISRDNIRSVT VNHMSDNRSMSVDLSHIPKDPPLFKSA SDTNLAKRAFPMDYLSDKHLGKASEDE SSGLVYKSGSGEIGSETSDKKDSFYTDSS SILNYREGFRIYLSFG*VMGNQNILSSTL TSKGNETVESIFKAEDLLPEASLSENAD ISKEETPPVRITLKISQSSLSGESLRERLPH PNLGFPLVFSYKNMKRSSSQMSF/EATIS LDSMILEEQLES DGS DSHMFLEKGNRK NSTTNYRGTAESVNAGANLQNYGETSP DAISTNSEGAQENHDDVMSVVVFKITGV NGEIDIRGEDTEICLQVNQVTPDQLGNI LRHYLCNRPVGSQKAVIHSKSSPEISLR FESGPGAVIHSLLAEKNGFLQCHNENFS TGFLTSSLMNIQHFLDETVATVMPMKI QVSNTKINLKDDSPRSSTVSLEPAPVTVH NDHLVVERSDDGSFHIRDSHMLNTGND LAKENVKSDSVLLTSGKYDLKKQRSVTQ ATQTSFGVPWPSQSANFPÆFSFGLHLGE QLMEENESLKQELAKAKMALAEAHLE KDALLHHIKMTVE
2224	10275	A	3156	149	382	ARHCGSCP*SQHFGRSR*AEHLRTGV*D QPAQRGETPSLWKNTKIRRAQWWCPPVI PATSGGLRQENYLNPGRQRLQ
2225	10276	A	3157	162	342	
2226	10277	A	3158	1	1995	FRLVTPGVPAFSGCGRRHGRGRTGRAM ASCVGSRTLSKDDVNYKMHFRMINEQQ VEDITIDFFYPHTITLLSFTIDSLMYFAF TTDDSV*DNWIRGILSGILLFLIKV*AFP NGPLTRPHPALWRMVFGELSELYFLVFLV LLFPEFEQAQSLMDWLDPNLRYATREA NVMEYAVNCHVITWERIISHFDIFAFGHF WGWAMKALLIRRYGLCWTSITWELTEL FFMHLLPNFAECWWDQVILDILLCNGGG IWLGMVACRFLERRTDHWASFKDIHTTT GKIKRAVLQFTPASWTYVRWFDPKSSFQ RVAGVYLFMIWQLTLELNTFFLKHFVF QASHPLSWGRILFIGGINSFPQLRQYYA YLTDTQCKR/L*GTQCWVFGVIGFLAI VCIKFGQDLFSKTQILYVVLWLLCVAFT TFLACLYGMIWYAEHYGHPRKRPTPECE DGTYSPEISWDHRKGTKSEDSPPKHA GNESHSSRRNRHHSKSKVTNGRWER NEKPWWNSKMFPECLGTEEGKWELHLG TPRGGSRAHRGKPRGEGTLGVILRSL SLCFPTDLGRVQADHRLGGPFANVGSLL TSALDMRSPVAARCVERETVAISFHSCQ EQLRAMLDRCGSVNIFPSDEALTPWLM WSPVFNIFIFYESTFPID
2227	10278	C	3159	410	538	
2228	10279	A	316	3	609	
2229	10280	A	3160	4	334	FFPKALIFCREVGPISPPPKIRFP/SPKFPGN RFSPPRVVKPPPGP/SPFKRPPIRKKILPCQ PP*TLAPPRIL*KGPP/PSSSSG*NPYYLFIQ QKTEYLLWSRCPWHCEQR

2230	10281	A	3161	1	1130	PLLPTSLSVEDAAILLQQVMRAFSKQAST VVFSDTVVVSEKFINDCTELFRELHMQK AEKEMKNNPVHLITEEDLKQISTLESVST SKKDKKDERRRKATEGSGSMRGGGGGN AREYKIKKVKKKGRKDDSDDESQSSH TENEESGYDKKDENELEDVKWGKTSQFL EIFQDIEKARDKTLEADSELESVFMSSTT SASGTGRKRTIKDLQEEVSNLYNNIRLFE KGMKFFADDTQAALTKHLLKSVCTDITN LIFNFLASDLMMAVDDPAAITSEIRKKIL SKLSEETKVALTKLHNSLNEKDQHALLV KYQGLVVKQLVSQSKKTGQGDYPLNNE LDKEQEDVASTTRKELQELSSSIKDLVLK SRKSSVTEE
2231	10282	A	3162	20	2478	RVCSSASTASQAVMADAWEEIRRLAA DFQRAQFAEATQRLSERNCIEIVNRLIAQ KQLEVVTLDGKEYITPAQISKEMRDEL HVRGGRVNIVDLQQVINVDLIHIENRIGD IUKSEKHVQLVLGQLNIDENYLADRVGQEV NDKLQESGQVTISELCKTYDLPGNFLTQ ALTQRLAIIIGHIDLNRGVIFTEAFVAR HRARIRGLFSATRPTAVNSLISKYGFQE QLLYSVLDELVNSGRRLRGTVVGGRRQDK AVFVPDIYSRTQSTWVDSFFRQNGYLEF DALSRLGIPDAVSYIKKRYKTTQLFLKA ACVGQGLVDQVEASVEEAISSTWVDIA PLLPTSLSVEDAAILLQQVMRAFSKQAST VVFSDTVVVSEKFINDCTELFRELHMQK AEKEMKNNPVHLITEEDLKQISTLESVST SKKDKKDERRRKATEGSGSMRGGGGGN AREYKIKKVKKKGRKDDSDDESQSSH TGKKKPEISFMFQDEIEDFLRKHIQDAPE EFISELAEYLIKPLNKTYLEVVRVFMSS TTSASGTGRKRTIKDLQEEVSNLYNNIR LFGKRGWKFFADDTQGWLLPKHLEV QCVLISLNLNFNFLGFGILMDGQ*DDPG RPFTSELRKENLSKLSEETKVALTKLHN SLNEKSIEDFIFCLDSAAEACDIMVKRG DKKRERQILFQHRQALAEQLKVTEDPAL ILHLTSVLLFQFSTHSMHLHAPGRCVPQII AFLNSKIPEDQHALLVKYQGLVVKQLV SPSKKTGQGDYPLNNELDKEQEDVAST TRKELQELSSSIKDLVLKSRKSSVTEE
2232	10283	A	3163	1	389	IPSEISRSVAFSL/LPLLSVSGLEAIQRTPK NQVYSRHPPENGKSKFLNCYVSGFHPSD IVGDLNMNGERIE*A*HSDLAFRKDWAF YLLDYTEFTPT/TEKDEYACRVNHVTLSP KICKWDRDMLSASMEA
2233	10284	A	3164	2	409	RPRVRPRVRSIRAEMSRVALAVLALLS LSGLEAIQRTPKIQVYSRHPAENGKSNFL NCYVSGFHPSDIEVDLLKNGERIEKVEH SDLSFSKDWAFYLLYYTEFTPT/TEKDEY ACRVNHVTLSPKIVKWRDM
2234	10285	A	3165	26	299	
2235	10286	A	3166	11	486	
2236	10287	B	3167	198	282	XPSLEDLSNSIQKLHLAENAEPEEQSAA*
2237	10288	A	3168	80	827	AQQAVLARSKLESCLRELHGHNRSLKEE GVQRAREEEKRKEVTSHFQVTLNDIQL QMEQHNERNSKLROENMELAERLKKLI EQYELREEHIDKVFKHKDLQQQLVDAK LQQAQEMLKEAEERHQREKDFLLKEAV ESQRMCELMKQQETHLKQQLALYTEKF EEFQNTLSKSSEVFTTFKQEMEKMTKKI KKLEKETMYRSRWESSNKALLEMAEE KTVRD/ERTGGPAGKNPTAGEAVPGTAD RAQ
2238	10289	A	3169	1	2511	

2239	10290	A	317	1	949	MGSCAARASLTSTTPCSTAPSPINHPKAE ECERTTAQDWQAAPPAAPVRDPLGEPS WAPESGGDVESLYIYLRDCKYTNQHPVF SSRFVNPPIDTLYLAALVGPWKTfMSSS GIVNTPIGTLYLAQVTVPPPLHTRFFALSP RQPRSFKNGLLFQTGTTLNPLSGYSSDY KGfGRFRNHPQTGFSPAGANQRGPLVAT LSGPGGEGQSAVPVSLVKRKTTAPNT QTASPRALADSLMQLARQVSPTGKRAV SATAINLKVCKHTSQHPVFSSRFVSAPID TLYLAALVRTWRVFMSSSGIVNTPIGTL YLAQGL
2240	10291	A	3170	93	517	GRGHLGG/VWC*RSQERAQQIKEASAEIT /CSWLQMKQNRKPSQEKTRDTRMENP DRGFVPGKECSFEQLEHVREMQUEKLARL HFSLDVCGEEDDEEEEDGVTEGLPEEQ KKTMAADRNLQLLSNVGSCLGALVPGG MRGGE
2241	10292	A	3171	3	348	FFAFFLGLIPFNAPLPHSTWGAAEHPPES VKSHSLKRMRGAVW/CLRGTPTRQ/HCS SGSAFSARCSFWIELLRSSRLSSWSRLR SAIVFFCSSGKPLSDPNPLPHRPPPPHTH PG
2242	10293	A	3172	2618	5946	PGCNFSLDVCREEEDDEEEEDGVTEGLP EEQKKTMAADRNLQLLSNARGRAWQL APMEPELLVRKVSALQACVRGFLVRRQF QSLRAEYEAIVREVEGDLGTQWTEGRI PRPRFLPEKAKSHQTKAGDRVANPEQ GLWNHFPCEESEGEATWEEMVLKKSSE SSANQGS�CRDHSSWLQMKQNRKPSQE KTRDTRMENPEATDQRLPHSQPQLQEL QYHRSHLAMELLWLQQAINSRKEYLLL KQTLRSPEA
2243	10294	A	3174	16	319	LGTRPAHRSSQ*GKGSPLPPGAPLISGA GKEGGPGDRAAHADFLPAEEGAHGM/R GSHGSPLIAPLPTYPHPPSGLFLGALPLA RPRHQGAALGSVHEIQ
2244	10295	A	318	1	4425	
2245	10296	A	3180	417	736	YGLGAVAHACNPSTLGGQAGQITRLAV QDQPDQHCETPSLIKMQKN/LPGHGGVC LQSLLRGLRQGNCLNQQGGGSCSEPRSH QCTPAWAIE*ESVSKKKKKKKLVV
2246	10297	A	3181	1	2061	MGAVRDELHSLVVPPLMGRGAQTPMA AAALRDPAQGCVTTFEDVTIYFSQEEWVL LDEAQRLLYCDVMLENFALIASLGLISFR SHIVSQLEMKGEPWVPDSVDMTSAMAR GAYGRPGSDFCHGTEGKDLPEHNVSVE GVAQDRSPEATLCPQKTCPCDICGLRLK DILHLAEHQTTTHPRQKPFVCEAYVKGSE FSANLPRKQVQQNVHNPIRTEEGQASPV KTCRDHTSDQLSTCREGGKDFVATAGFL QCEVTPSDGEPHEATEGVVDHFIALRHN KCCESGDAFNKSTLVQHQRHSRERPY ECSKCGIFFTYAADLTQHVKVHNKENP YECFEGGKFFKPAISLVKHRRVHTGESp HVCgDCGKFFSRSSNLQHkrVHTGEKP YECSDCGKFFSQRSSNLHhkrVHTGRSA HECSECGKSFNCSSLIKHWRVHTGERP YKCNECGKFFSHIASLIQHqIVHTGERPH GCCECGKAFSRSSDLMKHQRVHTGERP YECNECGKLFSSSSLSNHRRLHTGERP YQCSECGKFFNQSSSLNNHRRLLHTGERP YECSECGKTFRQSNLRQHLKVHKPDRP YECSECGKAFNRPTLIRHQKIHIRERSM ENVLLPCSQHTPEISLRTDLIRALSSTML NLVHPSTHTGEVP*EC*LCWKLSGDKLH SLTVEFISVFSLGL

2247	10298	A	3182	441	1074	Q R V Q R S L K K * C W G / F N W G H S G G K I * K Q I G P Y L N T G / T R L K S K W I I V P Q N C I S R R Q Q G K R V H L G L G K D F L N P T P K A Q S M / R G K I D K L Y F I K I E N F S L K G T I R R T K R Q A V E W Q K / Y L Q N I S D K * V A S R L H K E V S K L N K V K P I V D L M R C F / R P E L A A S G P C S L S F S I C F Q H * I Q N V L L E I Q V R S H Q P S E L S N R R P W H S K V H N S L Q C W A K H E A P L F S L L
2248	10299	A	3184	178	488	V S S T V F G N T V R N K T E D D S G G N W E P P R T I L Q A S G K L K N P K A R L A S E C L S P F D S T G K A I H L C Q V C G R A S R S H Y S L G H H / M R H S H V G E * S * K C P G C G K G F S T K L D L R W
2249	10300	A	3185	7	310	K K R S H C A Q A G L E L L S G Q L G * T S S V Q K I R K L A G C G G V H P W S Q L L E R L R W E D S L P Q G G Q G C S E P * S H H C T P A W A T E * D P V S N N N K Q K Q K P K E S N L S R A T S R P
2250	10301	A	3186	65	203	K G D F Q G H Q G P W D A P P * P A F W W Q R E A R G E G E A M S Q S P C R G R G N A E M Y R P S A Q P E T G P A S G * * T E A A R G S S G W A E P W P R G * K P P E F P M R L G W P F P T P G A F S L P I L C D E E R P * G Q R S S G C E S Q Q E L R S P R E T E L Q V T S P T C F S A G P R R P G P A P G G P Q A A R A Y C C H L K T S S E P T F H Q A P T Q A E V S W E F S P A / P P A D K E M T S M A T P E K C P T S Q V A P A I R K A A L P H P E R G N Y F L S A A W P Q G A P F L W G S A S P F V A L P W S P R A G A A P L C P G K A P P S K T R L G R A V T F P * A E G G T G R G R G H V A V P L P W E R Q R G N V
2251	10302	A	3188	1	2559	
2252	10303	A	3189	259	3222	
2253	10304	A	319	160	747	V L N G S G R P S Q S K K H F P P K P G T F G G A S V H Q M F I M S L P A / G P D L S G F D E D D K G W P E N Q L D M S D Y S S S Y Q D V A C Y G T L P R D S P R R N K E G C T S K T P H A L T V S P F K G I F S S A T K V F Q A P N A C K R G A * G K G * P W E G K A S S K P G R D F L R E G R K M S W K L F N R K L I S S Q P Y V P V G V C L T S V F T I A S L G E Q G M V F P L K V D L F K L T G
2254	10305	B	3190	114	2876	M D K F L D T Y T L P R L N Q E E V E S L N R P I T G S E I E A I N S L P T K K S P G P D G F T S E F Y Q R Y K E T V V C R L S P P S F N G G L P L G S D L V F Y A P G P Q K I I W V M V H V G A L A L K D G F S P L D V G V H G F C R F R N H H Q T G F S P A G A N Q R D P L A A T L S G P G G E G Q S A V A R L T G E K K N H P G A Q Y A N R L S P R V G R F I N A A G T T G F P T G K R A V S A T Q L M V K D D V T Y A I K L S C W P G L D I I P S C L A L H R I E T E L M G K F D K G R L P T H P H L M L R L A I E

2255	10306	B	3191	1	2640	MEIRGRVEQRVGYTIEQINHMRDVFGR LRRRAEDVFPPVIGVAAHKGGVYKTSVSV HLAQDLALKGLRVLLVEGNDPQGTASM YHGWWPDLHIHAEDTLLPFYLGEKDDVT YAIKPTCWPGLDIIPSCLALHRIETELMG KFDEGKLPTDPLMLRLAIETVAHDYDV IVIDSAPNLGIGTINVVCAADVIVPTPAE LFDYPSALQFFHMLCDLVKNVDLKGFEF GELAPLYGCWGLRTGIAVACAPHHASL NLHGLNQIRNVKKQSVYLMNLRKSGTL GHPGSVDETTYERLAEESLDSLAEFFEDL ADKPYTFEDYDVSFGSGVLTGKLGRL ATYVINKQTPNKQIWLSSPSSGLKRYDW TEKNWVYSHDCVSLHDVLAELTKALK TKLDLSSLAYSGKELDAQPGYYMLHAQ YMLRPPLSSPMQHRAPETGPTSRNSVLN AVTPAPTTPPSPLFDSRGSPPRRKTYQNV QQFIDEGNYTSGDNHILTRDPHYVEDKG HKYLVFEANTGTENGYQGEESLFNKAY YGGGTNFFRKESQKLQQSACKRDAELA NGALGHIELNNDYTLKKVMKPLITSNTVT DEIERANVFKMNGKWYLFDSRGSKMT IDXGSPXKIRLFYTDYSGKHYGKQSLTT AQVNVSKSDDTLKINGVEDHKTIFDGDG KTYQNVQQFIDEGNYTSGDNHILTRDPH YVEDKGHKYLVFEANTGTENGYQGEES LFNKAYYGGGTNFFRKESQKLQQSACK RDAELANGALGHIELNNDYTLKKVMKPL ITSNTAAANQESSHVQQQALALEQQFLE RTQALEAQIVALERMRAADQTTAKQGM CTQVHLTNTSRHAGRPSKCQFCSTRQR HRLSDPKQDLGNRRFSPPP*
2256	10307	A	3192	1	454	MERRNRRTGRTEKARIWEVTDRTVRTW IGEAVAAAAADGVTFVPTPHTRHSY AMHMLYAGIPLKVLQSLMGHKSISSTEV YTKVFALDVAARHRAIRVPRQQGDYRT RIWKFEGLSNVLVIQLNKLICVMCLVR DCDVLKTYFHL
2257	10308	A	3193	2758	2946	
2258	10309	A	3194	2372	3570	EALLPGDQDSQSGKGVAAREVWFLPSSF APVLLRLVGNHHVGDNSIDSWKNAGR/V FKDSDKFDANDPILKDQTQEWSGSATFT SDGKIRLFYTDYSGKHYGKQSLTTAQVN VSKSDDTLKINGVEDHKTIFDGDGKTYQ NVQQFIDEGNYTSGDNHILTRDPHYVED KGHKYLVFEANTGTENGYQGEESLFNK AYYGGGTNFFRKESQKLQQSACKRDAE LANGALGHIELNNDYTLKKVMKPLITSNT VTDEI

2259	10310	B	3195	1	2232	MKLMETLNQCINAGHEMTKAIAIAQFND DSPEARKITRRWRIGEAADLVGVSSQAIR DAEKAGRLPHPDMEIRGRVEQRVGYTIE QINHMRDVFGRRLRAEDVFPVIGVAA HKGGVYKTSVSVHLAQDLALKGLRVLL VEGNDPQGTASMYHGWVDPDLHIHAEDT LLPFYLGEKDDVTYAIKPTCWPGLDIIPS CLALHRIETEFMGKFDEDNAGMVRVL QPFTSDEKKSIVSTLTFPGKHLRRDKSLT TAQGCDKINNKTSPPTSPDLALKGLRV LLVEGNDPQGTASMYHGWVDPDLHIHAE DTLLPFYLGEKDDVTYAIKPTCWPGLDII PSCLALHRIETELMGKFDEGKLPTDPHL MLRLAIETVAHDYDVIVIDSAPNLGIGTI NVVCAADVLIPTPAELFDYTSALQFFD MLRDLLKNVDLKGFEVDVRIILLTKYSNS NGSQSPWMEEQIRDAWGSMLKNVEPE NGEVGKXGSPQLINQEKKMFIRNRSYI DRDSEYLLQENEPDGTLDQKLLLEDLQKK KNDLRYIEMQPFPLVSSSRWVVKRGELT AYVEDTVLFSRRTSKQQVYFFLFNDVLI TKKKRRSDSSLREGDNQKAYKETYGVS HITRHDMLQIPKQQQNEKYQVPQFDQST IKNIESAKGLDVSDAGMVPVLQPLHLTE KSGYSTLTIPVNLRQTSLTQRKVMCQNL VTHLKSTEWKHKTIVDGERKTYQKRS AVFRMKGILHSATTIR*
2260	10311	A	3196	1260	1340	LPMALAVGFCFRNHHQTGFSPAGANQ RGPLAATLSGPGGEGQSAVARLTGEKK NHPGAQYANRLSPRVGRFINAAGTTGFP TGKRAFGFCFRNHHQTGFSPAGANQRG PLAATLSGPGGEGQSAVARLTGEKKNHP GAQYANRLSPRVGRFINAAGTTGFPTGK RAGFCFRNHHQTGFSPAGANQRGPLA ATLSGPGGEGQSAVARLTGEKKNHPGA QYANRLSPRVGRFINAAGTTGFPTGKRA QAQAK*WHYREPLLLRAQLTNPPSGQQL KSDVDQWPVQKQFSSGSDLYQLHPFHVQ HFLEPCFPRHPEFAPPSTGTESHYKCIW
2261	10312	B	3197	200	2602	MQLARQVSRLESQVVKHEGQHTKMSQ VLWRSQEENPATLGNNIQLFDWIPQNDL LGHPKTKAFTTHGGTNGIYEAIYHGVPM VGVPMFADQPDNIAHMKAKGAABEVN LNTMTRPGGEGQSAVARLTGEKKNHPG AQYANRLSPRVGRFINAAGTTGFPTGKR AVSATQLMDFADFGTTIKQDFRLLGQTS VDRLLQLSQGQAVKGNQLLPVSLVKRK TTLAPNTQTASPRALADSLMQLARQVSR LESQDFADFGTTIKQDFRLLGQTSVDR LLQLSQGQAVKGNQLLPVSLVKRKTTLA PNTQTASPRALADSLMQLARQVSRLESQ QILPDFGPHHQTEFSPAGANQRGPLAAT LSGPGGEGQSAVARLTGEKKNHPGAQY ANRLSPRVGRFINAAGTTGFPTGKRAVS ATQLIPKVDKTTKIGKKQSRKTGNSKNQ SASPPPKESSSSHATEQNWTFDELRE EGFKRSNCSELQEEVQTHGKEVKNLEKK LDEWLTRITNEEKPLKDLMEKTKAQEL RDKCTSLSRFNQLLEERVSVMEDQMNE MKREEKFREKRIKNEQSLQEIWDYVVKR PNLRLIGVPESDGENGTLENTLQDIIQD FADFGTTIKQDFRLLGQTSVDRLLQLSQ GQAVKGNQLLPVSLVKRKTTAPNTQT ASPRALADSLMQLARQVSRLESQHPAPC MKSNNALIVILGTVTLDVAVGIGLVMPVL PGLLRDIVHSDSIASHYGVLLALYALMQ FLCAPVLAALSDRFRRTVLLASLLGATI DYAIMATTPVLWIYPLVNSPSC*

2262	10313	B	3198	1	3198	MKLMETLNQCINAGHEMTKAIAIAQFND DSPEARKITRRWRIGEAADLVGVSSQAIR DAEKAGRLPHPDMEIRGRVEQRVGYTIE QINHMARDVFGTRLRRAEDVFPVIGVAA HKXSPVIGVAAHKGGVYKTSVSVHLAQ DLALKGLRVLLVEGNDPQGTASMYHG WVPDLHIHAEDTLLPFYLGEKDDVTYAI KPTCWPGLDIIIPSCALHRIETELMGKFD EGKLPTDPLMLRLAIETVAHDYDVIVID SAP
2263	10314	A	3199	1	2259	
2264	10315	A	32	603	855	GGWIMRSGVRDQPDQHGETLSLLKLQK LAGHGGACL*SQLVRRRLQYHLNPGG GGCSEPRFGHCAPAWATE*DSVSGKKK KKK
2265	10316	A	320	1812	5065	PNKTGGKTVSDGLHHPSQLHSKLENDQ GFYNVDSSTGFHNKTNPVGPFRKSPFLV MGVDWAETRRSMMMQRRAPMDDIL ARDGRSRLSRGNRRNGGGGCRDDDDDDG GGAGAVRTGEGATEELPPVGGRRVPQH RGELFVLSSAGDLHRDRDTHRGAGSG GGSAMASGAGGVGGGGGGKIRTRRCHQ GPIKPYQQGRQQHQVSSSRPDLSGFDED DKGWPEQLDMSDYSSSYQDVACYGTL PRDSPRRNKEG
2266	10317	A	3200	1	2418	
2267	10318	A	3201	1907	5097	TSKKIVKQAPVLTFTTA/LLAGGAIQAF KENNHKAYKETYGVSHITRHDMLQIPKQ QQNEKYQVPQFDQSTIKNIESAKGLDVW DSWPLQNADGTVAEYNGYHVVFALAGS PKDADDTSIYMFYQKVGDNDSWKNA GRVFKDSKFDANDPILKDQTQEWSGS ATFTSDGKIRLFYTDYSGKHYGKQSLTT AQVNVSKSDDTLKINGVEDHKTIFDGDG KTYQNVQQFIDEGNEGILPISEPPIKQDFR LLG
2268	10319	A	3202	891	2136	GATQAFKENNQKAYKETYVESAKGLD VWDSWPLQNADGTVAEYNGYHVVFAL AGSPKDADDTSIYMFYQKVGDNDSW KNAGRVFKDSKFDANDPILKDQTQEW SGSATFTSDGKIRLFYTDYSGKHYGKQS LTTAQVNVSKSDDTLKINGVEDHKTIFD GDGKTYQNVQQFIDEGNYTSGDNHILR DPHYVEDKGHKYLVFEANTGTENGYQG EESLFNKAYYGGGTNFRKESQKLQQA KKRDAELANGALGIELNNDYTLKKVM KPLITSNTVTDEIERANVFKMNGKWYLF TDSRGSKMTIDGINSNDIYMLGYVSNL TGPYKPLNKTGLVLQMGLDPNDVTFTY SHFAVPQAKGNVVTSYMTNRGFFEDK KATFAPSFLMNIKGNKTSVVKNSILEQG QLTVN
2269	10320	A	3203	1	3987	
2270	10321	A	3204	2	247	QGAGFSSSLRMASIFSISVGTDRDLSRLS TILSPLYNTVAPGAN*CRELKLVLADDD VLSTEVKRVTSSASNITPAFFCS
2271	10322	A	3205	1099	2224	DGQQLIALHRLALRELOQAVHAGLPQQ AKILFDGGSE/TRQNPLQQLVHMGLPRPL DKKNFQEP
2272	10323	A	3206	1366	2673	
2273	10324	A	3207	1	7035	
2274	10325	A	3208	1	2328	
2275	10326	A	3209	1	2328	

2276	10327	A	321	819	1242	KAYASLSLWQAPSGESRPAPAAADLRGS SG/RPP*TFPNPPCGPHTGCPAGSFPIFQ PRCLLVAKSKPGMPVSDAAAYESPWKG GAGAPALGLLGALSSEVADRALQAAPA WAPRDAGRDLPGQDRPQGPAGASLGP SRS
2277	10328	B	3210	1	2541	MPRQVSGSGPGLLVAGQAAVGTGGKK SLCQYRKPDGSGIVSLKIDWIERYQLPQ SYQHRKAGECLLHEYEDLVPIRDTLRLF PGGRYLPRAKHVAPSEPDPDEQDEQLRD FADFGTTIKQDFRLLGQTSVDRLLQLSQ GQAVKGNQLLPVSLVKRKTTLAPNTQT ASPRALADSLMQLARQVSRLESGQDFA DFGTTIKQDFRLLGQTSVDRLLQLSQGQ AVKGNQLLPVSLVKRKTTLAPNTQTASP RALADSLMQLARQVSRLESGQDFADFG TTIKQDFRLLGQTSVDRLLQLSQGQAVK GNQLLPVSLVKRKTTLAPNTQTASPRAL ADSLMQLARQVSRLESGQDFADFGTTIK QDFRLLGQTSVDRLLQLSQGQAVKGNQ LLPVSLVKRKTTLAPNTQTASPRALADS LMQLARQVSRLESGQDFADFGTTIKQDF RLLGQTSVDRLLQLSQGQAVKGNQLLP VSLVKRKTTLAPNTQTASPRALADSLMQ LARQVSRLESGQDFADFGTTIKQDFRLL GQTSVDRLLQLSQGQAVKGNQLLPVSL VKRKTTLAPNTQTASPRALADSLMQLA RQVSRLESGQDFADFGTTIKQDFRLLGQ TSVDRLLQLSQGQAVKGNQLLPVSLDD VTYAIKPTCWPGLAIHPSCLAHRIETELM GKFDEGKLPTDPHMLRLAIETVAHDYD VIVIDSAPNLGIGTINVVCAADVLIPTPA ELFDYTSALQFFDMLRDLLKNVDLKGFE PDVRILLTKYSNSNGSQSPWMEEQIRDA WGSMVLKNVVRETDEVGKGQIRMRTVF EQAIDQRSSTGAWRNALSIWEPVCNEIFD RLIKPRWEIR*
2278	10329	A	3211	1	3849	
2279	10330	B	3212	1	6724	MDNFFAPVFTMGKYYTQGDVLMPLAI QVHHAVCDGFHVGRMLNELQQYCDWE QGGADFADFGTTIKQDFRLLGQTSVDRLL QLSQGQAVKGNQLLPVSLRKQNTSRPP SMHVDDFVAAESKEVVPQDGIPPKRPL KVSQKISSRVENLNTLNLKELMLCHHQ EEGAGEDLDRVYDLMIFFVRENRTQVD HHLCMWMTTTTLLKVKKWFLKMEYLHQ NGHSKYHRRFLPVVGFQAIEDGVLSTV RIGFSHLL
2280	10331	A	3213	532	1232	
2281	10332	A	3214	8749	11698	CSWHD RFPDWKAGRILPISEPPSNRIFAC WGKPAWTGLLQLSQGQAVKGNQLLPVS LGFRGPPASNPGGAPGSASVAAAAA AKAAAAAAPVDNAAPHSAAKLEERRK PDPRDFADFGTTIKQDFRLLGQTSVDR LLQLSQGQAVKGNQLLPVSLVKRKTTLA PNTQTASPRALADSLMQLARQVSRLESG QDFADFGTTIKQDFRLLGQTSVDRLLQL SQGQAVKGNQLLPVSLVKRKTTLAPNT QTASPR
2282	10333	A	3215	3	452	
2283	10334	A	3216	24	609	GIPQTQREPTMVLSPADKTNVKAAWGK VGAHAGVEYGAEALERMFLSFPTTKTYF PHFDLSHGFCPLRATGKKVADALTNA VAHVDDMPNALSALASDLHAHKLRVGP GSTFKLLSHLPCW*TLGRPPSPAEFQPLA VARLPWEKFPGLFVEAPLLDLQITFKVG SFGWPLFFCPFGPPSPSSPFLHPYPRGL

2284	10335	A	3217	3	583	EPRLRKAGLLSRSRQNDQEGREGAQQ WPAYGPARGVVPQPVVQTGTWQNTG QRVPQLPPHPPPIHLVSRHRGKLRHGFLR PMPEPRGLESCKT/GQCSGSCSMYVTMR AKRPWEGGHDLT/QQGGCRSSVCGRRA HEALRPRVWCGEGPQWTWCVCPCNRS APGAGLAD\RQHPGESRAWGETRLGEAG GAE
2285	10336	A	3218	3	398	
2286	10337	A	3219	1766	3896	NTKLDQAQQAPEDHYPISLLPSHMAIG LLMAQEGHCKDSSAMGEEAHPLTPAT PPFPPLSPDWGHMQPDDFFVPVAVPAVFR GPPQLQCHGRRLFLNSPCAQKSSSGLVV EPGLSRTLLEMVKLTSMRGQFLEAQIPT GISLTLQYQLYQKQTNKNMSYSFVFLK WVALGQGRRAGYPSLEDADSRFNGSR SFLITVIGITLTVEIVTSGMMKGTRVRWS GAGNEGMMGLEEGRNERSVKEAPPRRA VEAQPKDRTWDVKGQGGTEGEGRGLEV EGQHQGSEPGTIPFSVSWGVLLLAGLC CLVPSSLVEDPQEDAAQKTDTSHTDQG DWEDLACQKISYNVTDLAFDLYKISWLI YHNQHVLTPTSAMAFAMLSLGTKA DTRTEILEGLNVNLTETPEAKIHECFQV LQALSRPDTRLQLTTGSSLFVNKSMKLV DTFLEDTKKLYHSEASSINFRDTEAKEQ INNYVEKRTGRKVVDLVKHLKKDTSLA LVDIYSFHGKWKDKFKAERIMVEGFHV DDKTIIRVPMINHLGRFDIHRDRELSSWV LAQHYVGNATAFFILPDPKMWQLEEK LTYSHLENIQRAFDIRSINLHFPKLSISGT YKLKRVPRNLGITKIFSNEADLSGVSQEA PLKLSKAVHVAVLTIIDEKGTEATGAPHL EEKAWSKYQTMFNRPFVLIKEYITNFP LFIGKVVNPTQK
2287	10338	A	322	2	373	PRVRVRVDLVSGWGGKMVDLFVLVTV KRVIDYAVKILVKPDWTGVVSDGVKHS LNPFCDAVDEAVLLKEKLVKEGIACV CGPAQCQETNRTALGMGAHRGIHVEVS P**AQRLCPLQVARG
2288	10339	A	3220	3	1226	MRRNKPRQGVREARPAAGAGPGWRG ARCSGAGEGGGGERRGSPPAALALAPAS GPRRNFPDARCLIQIHHQGAFLLAGSA SLSAVTGVPEGEARFTEDYCPEEKMFGF HKPKMYRSIEGC/CISGAKSSSRFTDSKR YEKIDFQSCFGLHETRSGD/CNACVLLV KRWKKL/PAGSKKNWNHVVDARAGPS LKTTFEPKKVKTLG\NRIK\STQISKLOK EFK\RSNSDAHSTSSASPAQSPCYSNQS DDGSDTEMASGSNRTPVFSFLDLTYWK RQKICCGIYKGRFGEVLIDTHLFKPCS NKKAAAEKPEEQGPEPLISTQEWTECP DLSLVVSWRPPLSSLPAGCSLHGLAADW TTDMITVTTSKCREPSCQEGSFQRRKA FPKRLPKMAEVQVLLL
2289	10340	A	3221	1	269	
2290	10341	A	3222	240	377	SNTHRVPTFTDAWEVEMVTSLSLQSFL LPHIHCLKLQ*DPLHSP
2291	10342	A	3223	47	263	
2292	10343	A	3224	416	498	KRLSLQSFLLLPHIHCLKLQ*DPLHSP
2293	10344	A	3225	1	305	RTRGRTRGGDGGGHLGSGRNGGSGMN APPAFESFLPLRG/QRRITINKDTKVPNAC LFTMNKEDHTLGNIIKSRACFPFAFCRD CQFPEASPATLPVQPAEL

2294	10345	A	3226	74	562	GSGGGGGHLSGRNGGSMNAPPAFE SFLLEGEKK/ISDAGCGPRITINKDTKV PNACLFITNKEDHTLGNIIKSQRDLKDPQ ALFAGYKVPHPLAEHKIIIRVQTTTPDYSPQ \RAFTNRQSPDL\ISELSLLGGSAFRGGHK KTSQERNLSRGARGGLCSGL
2295	10346	A	3229	1	2661	
2296	10347	C	323	303	395	
2297	10348	A	3230	1	1454	
2298	10349	A	3231	1	2364	
2299	10350	A	3232	1	1368	
2300	10351	A	3233	114	1473	VKGDRFGALRFNDPCAGIKLPMTFFTEL EKTTLKFIWNQKRARIAKSILSQKNKAG GSTLPDFKLYYKATVTKTAWYWYQNR DIDQWNRTGPSEITPHTYNYLIFDKPEKN KQWGNDSL FNKWCWENWLAICRKLKL DPFLTPYTRINSRWIKDLNVRPKTIKLE ENLGITIQDIGMGKDFMSKTPKAMATKD KIDKWDLIKLSFCTAKETTIRVNRQPTK WEKIFATYSSDKGLISRIYNELKQIYKKK TNNPIKKWAKDMNRHFSKEDIYAAKRH MKKCSSSLAIREMQIKTTMRYHLTPVRM AIKKSGNNRCWRGCGEIGTLLHCWWD WKLVPQLWKS VWRFLRDLEIPFDPAI PLLGIYPNDYKSCCYKDTCTRMFIVALFT IAKTWNQPKCPTMIDWIKKMWHIYTME YYAAIKNDEFM/SFVG TWKLEIILSKL LQEQKTK
2301	10352	B	3234	1	1890	MDKFLD TYTL PRLNQEEVESLNRPTGSE IVAIINSLPTKKS PGPDGFTA EFYQRYKEE LVPFLKLQFQIEKEGILPNSFYEASHILIP KPGRD TT K IENFRPISLMNIDAKILNKILA NRIQQHIKKLIHHDQVGFTPGMQGW FNI CKSNIIQHINRTKDKNHMII SIDA EKA FD KIQQHFM LKTLNKL GIDGTYLKMIRTIY DKPTANIILNGQKLEAFPLKTGTROGCPL SPLLFNIVMELLARAI RQEKEIKGIQLGKE EVKLSLFADDMIRIKYLG IQLIRDMKDLF KENYKPLLNEIKEDTNKWK NIPCSWVGR INIVKMAILPKVIYRFNAIPIKLPMTFFTE LEKTTLNFIWNQKRARTAKSILSQKNKA RGIMLPDFKLYYKATVTKTAWCWYQNR DIDQWNRT EPSEITPHIYNYLIFDKPDKN KQWGKDSL FNKWCWENWLAICRKLKL HPFLTPYTTINSRWIKDLNVRPKTIKLE NLGNTIQDIGMGKDFMSKTPKAMATKA KIDKWDLIKLSFCTAKETTISVNRQPTK WEKIFATYSSDTGLISRIYNELKQIYKKK TNNPINKWAKDMNRHFSKEDIYAAQKH MKNAHHHPSEKCKSKHNEIPSHTS*

2302	10353	A	3235	1	2676	MKAEIKMFFEINENKDDTTYQNLWDAFK AVCRGKFIALNAHNRKQERPKIDTLTSQ LKELEKQEQTHSKASRRQEMTKIRAEK EIEIQKTLQKINESRSWFFERINKIDRPLA RLIKKKREKNQIDAIAKNDKGDITTDPT QTTIREYYKHLANKLENLEEMDKFLDT YTLPRLNQEEVESLNRPTGPEIVAINSLP TKRSPGPDGFTAIFYQRYKEELVPFLLK LFQSEKEGILPNSFYEASIIIPKPGRDTT KKENFRPISLMNIDAKILNKILANRIQQHI KKLIHHDQVGFIPGMQGWFNIRKSINVV QHINRTKHKNHMIISIDAEKAFDKIQPF MLKTLNKLSDGTYLKIIRATYDKPTANII LNGQNLEAFPLKTGTTRQGHPLSPLLFNIV LEVLAIRQEKEIKAQNLLKLISNFRKV SVYKINVQKSQAFLYTNNRQTESQIMRE LPFTIASKRIKYLGIQLTRDVKDLFKENY KPLLNEIKEDTNKWNIPCSWIGRINIVK MAILPKVIYRFNAIPIKLPTTFFTELEKTIL KFIWNQKRAHIAKTILSQKNKAGGIMLP DFKLYYKATVTKTAWYWYQKRDIDQW NRIELSEIIPHIYNHLIFDKPDKNKKWGK DSVFNKRCWENWLAICRKLKLDFTLTPY TKINSRWIKDLHVRPKAIKTLEENLGITIQ DIGMGKDFSTKTPKAMATKAKIDKWDLI KLKSFTAKETTIRVNRQPTKWEKIFAIY SSDKGLISRIYKELKQIYKKKTNNPIKKW AKDMNRHFSKEDIYAANRHMKKCSSL AIREMQIKTTMRYHLTPVRKAIKKSGNN RCWRGCGEIGTLLHCWWDCCLVQPLW KTVWQFLRDLELEIPFYPAIPLLGIYPKD Y
2303	10354	A	3236	1	3045	MDKFLNTYTLPRLKQEEVESLNRPTGS DIEAINSLPTKKSPGPDGFTAFCQRYK EE/LEKEGILPNSFYEASIIIPKPSDTTK KENFRPISLMNINAKILNKILAKQIRQHIK KLIHHDQVGFIPGMHGLFNICKSVNIIQHI NRTNDKNHMIISIDAEKPFDKIQQHFML KTLNKLQAQNLLKLIGNFSKVSQYKINVQ KSQAFLYTNNRQTESQIMNEFPFTIASKR IKYLGQLTRDVKDLFKENYK
2304	10355	A	3237	1	2142	
2305	10356	A	3238	1	1551	MRFKEKIHLHNIKEPSEAASADGGAVAS YPLAKIVDEGRYKAEVMQLRCGWRAP ASDCVHSVAVVGVDVLEVLARAIRQE KEIKGIQLGKEEVKLSLFADDMIVYLENP TVSAQNLLKLISNFSRVSGYKINVQKSQ AFLYTNNKQTESQIMSELPFTIASKTIKYL GIQLTRDVKDLFKENYKPLLNKIKEDTN KWKNIPCSWIGRINIVKMAILPKVIYRFN AIIHLPMPTFFTELEKTTLKFIWNQKGVH IAKSILSKKNKAGGIMLPFKLYYKATV TKTAWYWYQNRYTQCNRTEPSEIIPHI YNHLMFDKPDKNKKWGKDSL FNKWCW ENWLAICRKLKLDPFLLTPYTKINSRWIKD LNVRPKPIKTLEENLGITIQDIGMGKDFM SKTPKAIATKAKIDKWDLIKLKSFTAKE TTIGVNRQPTTELEKIFAIYSSDKGLISRIY KELKQIYKKKNPIKKWVKDMNRHFSK EDIYAVNRHMKKCSSLVIREMQIKTTM RYYLTPV

2306	10357	A	3239	1	1458	GLSGDLLGAHQPLDVLGCVQPLDLLLP PQNLLALQSLQDDLLWALDPAAPWA MDRGAATQWAVGPVSDPVVMEAVAS LPSAMDLSAAQPTWLLGAASLLVTDQ PMDQPSADQLAEFPDLLSKVSQSLRIKY LGIKLTRNVKDLFKENYKPLLNEIKEDTN KWKNI PCSWVGRINIVKMAILPKVIYRFN AIPKLPMTFFTELENTTLKFIWNQKRACI AKSILSQKNKAGSIMLPDFKLYHKATVT KTAWYQYQNRDIDQWNGTEPSEIMSHIY NYLIFDKPEKNKQRGKDSLFSKWCWEN WLAICRKLKLDPFLTPYTKINSRWIKDLN VRPKIKTLEENLVNTIQDIGMGKDFMSK TPKAMATKAKIDKWDLIKQKSFCTAKET TIRVNRQPTWEKIFAIYSSDKGLISRIYK ELQQIYRKKTNNPIKKWAKDMNRHFSK EDIYAANRHMKKCSSSLAIREMQIKTTM RYHLTPV
2307	10358	A	324	268	393	DGRRKEKWHKVERRHRPYLLSSLSQHR W*TVTNFGEISGTIAIEVDEGTYIHALNN GLFTLGAPHK/ERIALKPGYGKYLINSND ELVV/GRSDAIGPREQWEPVFQNEVRN GGPAEMGEEKRNGTKWREDTDHTSFPL FPSTGGQPKAHSNWRKVCH
2308	10359	A	3240	1	2028	
2309	10360	A	3241	2	1547	
2310	10361	A	3242	3	1945	
2311	10362	A	3243	1	2124	
2312	10363	A	3244	1	2250	
2313	10364	A	3245	2	2483	GKYYKLSSGTAPTCVSLGWGLARGDSA APALGSRTSACAPCSHGTWKLSDPSDR LSPCDRSSEEAHTHAPHRLALVASLPW SRLPLLAPQSHSEAEATSQPTGVENHHQ KTRYVKAGGPVICRSLPESRGFLWASEG RKCMIGSWAAMGRLRKSTISSRFGPQT LAGTGRPQAIPVLKKHSDAVLLGVCFLK LLHQHHQELGENADSQTLPTQTHWEIFLS EDYNKMTVPVKNYQVLEVLARAMRQEK QIKSIQLGKEEVKLSVFADDMIVYLENPI VSAQNLLKLISNFSKVSQYKINVQKSQA FLYTNNRQTESQIISLPFTIPSKRIKYLGI QLTRDVKDLFKENYKPLLNEIKEDTNKW KNIPCSWVGRINIMKMAILPRVIYIFNAIS IKLPMTFFTELEKTTLKFIWNQKRARIAK TILSQKNKAGGITLPDFKLYYKATVTKT AWYWYQNRGVDQWNRIEPSEIIPHIHNH LIFDKPDKNKKWGKDSLFTKWCWENW LAICRKLKLDPFLTPYTKINSTWIKDLNV RPKTIKTLEENLGITIQDIGMGKDFMSKT PKAMATKAKIDKWDLIKLKSFCTAKETT IRVNRQPTWEKIFTIYPSDKGLIPRIYKE LKQIYKKSNPIKKWAKDINRHFSKED IYAANRHMKKCSSSLVIREMQNKITIR/Y HLTPVRMAIKKSGNNRDMDEAGNHHS EQTIARTENQAPYLLTHRWEINNENTWT QVEEHHTLGPVGVICRKVFPGNSGPSKP SGLHFSQPLPQVTSVVAKITIVPWEMKLI AMGVQDELNIAFHKNHLLMNDTTIHMT PYIQAPKS
2314	10365	A	3246	1	2622	

2315	10366	A	3247	853	2831	YPESTMNSNKFTRKKQTPPSKSG*RI*TD TSQKKTFMQPKDT*KNAQHHSLEKCK SKPQ*DTISHQLEWRSLKSQDRKD*QSTL LAILIKKKGQKNQIDT/IKNDKEGITTDP EIQTTIREYYKHLTYTNKVENLEEMDKFL DTYTLP TLKQKKEVKTLNRPITGSEIEAI NSLPT/KKSPGPDRFTAIFYR/DIRSSGQG NQARERNKGYSIRKRGSIQVPCR*HHC FRKPHHLSPKSS*ADKQLQOQLRIQNQSA KITSIPHIQ*QTNREPNE*TIHNCFKEN KMPRNPITYKGCEGSLQGELOTTAQ*NK RGHKRMEEHSMMLDRKNQYRENGHTA QGNL*IQCHPHQATNDFHRIKKNYFKV HMEPKKSPHRQVNPKEQSWRHHTT* LQTLQGYSNQNSMVLVPKQRHRPMEQ NRAPGNNTIHLQLSDL*QI*QKQEMGKG FPI**MVLGKLANHM*KAETGSLPHILYK N*FKMD*RLKC*T*NHKNPRRKPRQYHS GHRHGQGLHD*NTKSNGNKSQN*QMGS N*TKELLHSTRNYHQSEQATYRMGENFC NLLI*QRANIQNLQRT*TNLQDKNKQPH QKVGGYEQTLKRRHLCSQKTHEKML IITGHQRNANQNHNEIPSHTS*NGDH/SN QVRKQQVLERMWRN
2316	10367	A	3248	1	4954	MVFSIDAQKAFDKIQHRFMLKTLNKLGI DGTYLKIIIRAIYNKPTGNIILNGQKLEAFP LKTGTROGCPLSPLLFNIVLEVLARAIQ EKEIKGIQLGKEEVKLSLFADDIIVYLENP IVSAQNLLKLIGNFSKVSQYKINVQKSQA FLYTNNRQTESQIMSELPFTIASKRIKYL GIQLTRDVKNLFKENYKPLLNEIKEDTD KWKNIPCSWIGRIHVKMATLPKVIYRLH AIIHKLPMFTFFTELEKTTLKFIW
2317	10368	A	3249	25	527	EFHRLRENPPMVAVSCPTKTNVKAAWG KVGAHAVRSMCAEALERMFLSFTITKT YFPHFDL\SHGSAQVKGATGKKVADAL TNAVANVDDMPNVAVRPEATLHAHKL RVDPVNFKLLKPLACLVDGPAHLPRP SFTPGGATSSLGQSFLGFLKHRCLNLPN YR
2318	10369	A	325	1	67	
2319	10370	A	3250	97	1360	SACAWRLPSPGPSAMWPLWRLVSLAL SQALPFEQRGFWDFTLDDGPFMMNDEE ASGADTSGLVHPDSVTPTYSAMCPFGC HCHLRVVQCSDLGLKSVPKEISPDITLL DLQNDISELRKDDFKGLQHLVYALVLA NNKISKIHEKAFSPRLKQLYISKNHV EIPPNLPSLVIELRIHDNRIRKVPKGVFS GLRNMNCIEMGGNPLENSGFEPGAFDG LKLNYLRRISEAKLTGIPKDLPETLNLHL DHNKIQAIELEDLLRYSKLYRLGLGHNQ IRMIENGSLSFLPTLREVHLDNKLAR VPSGFPDLKLLQVV/YILHSNNIHQSGVF NEFLFPWFGGEAGPYYNH/ISLFNNPV PYWEVQPATFRVVTDRLAIQFGQLQKV EAAAATLVSQWGS LGNRARHPDGEAEP GS
2320	10371	A	3251	1	2535	

2321	10372	A	3252	5	2333	NPILWLETQMASNERDAISWYQKKIGAY DQQIWEKSIEQTQIKGLKNPKKMGHIK PDLIDVDLIRGSTFAKAKPEIPWTSLTRK GLVRVVFPLFSNWWIQVTSRIFVWLL LLYFMQVIAIVLYLMMPIVNISEVLGPLC LMLLMGTVHCQIVSTQITRPSGNNGNRR RRKLRTVNGDGSRENGNSSDKVRGIE TLESVPIGGFWETIFGNRIKRVKLISNKG TETDNDPSCVHPIKRRQCRPEIRMCQTR EKPKFSDGEKCRREAFRLNGVSDDL SEEDGEARTQMILLRRSVEGASSDNGCE VKNRKSILSRHLNSQVKTTTRWCHIVR DSDSLAESEFESAASFQSGRSVSGGSR LNMSRRDSESTRHDETEDMLWDDLH GPECRSSVTSDEGAHVNTLHSGTKRDP KEDVFQQNHLFWLQNSSPSSDRVSAIW EGNECKKMDMSVLEISGIIMSRVNAYQQ GVGYQMLGNVVTIGLAFFPFLHRLFREK SLDQLKSISAEILTLFCGAPPVTPHVL INFFERLCLTWMFFFMCMVAERTYKQ FLFAKLFSHIYFCQKLGKYEIPHFRLKK VENIKIWLRLSYLKRRGPQRSVDVVVS SVFLLTSLAFICCAQVLQGHKTSWDA YNWGVFDLGETALLFLRLASLGSETN KKYSNVSILLTEQINLYLMEKKPNKKE QLTLVNNVLKLSKLLKELDTPFRLAYGL TMNPLIYNITRVVILSAVSGVISDLLGFNI RLWKIKS
2322	10373	B	3253	73	358	XVPGSRGPETKLWDDFSMSQATKRKHV VKEVLGEHIVPSDQQQIVRVLRTPGNNL HEVETAQQQRFLVSMPSKYRKNIWIKRG DFLIVDPIEEGEK*
2323	10374	A	3254	80	201	
2324	10375	A	3255	498	748	FLPRRGDNDSPQ/WTACACRRRRTCW* T*TWIRSGQRKMWSCGRRSLTTCMP RTRTAARLMACGSGSWRRSGPCGCR LSP
2325	10376	A	3256	1	1764	MTTSQKHRDFVAEPMGEKPVGSLAGIGE VLGKKLEERGFDKAYVVLGQFLVLKKD EDLFREWLKDTCGANAKQSRDCFGCLR E/WCAKSRPAAEVSELKADSKGEPQAQ GEQERTGL
2326	10377	A	3257	842	1186	FLPRRGDNDSPQ/WTACACRRRRTCW* T*TWIRSGQRKMWSCGRRSLTTCMP RTRAATTWRSKNLALSCPSMTKSLKGS GHIPSAWSRAARLMACGSGSWRRSGPS CGCRLSP
2327	10378	A	3258	526	1158	SCGLSLIKMTTSQKHRDFVAEPMGEKPV GSLAGIGEVLGKKLEERGFDKGL/YVVL GQFLADIEKMKTSFREWLDTCGANAK QSRDCFRMPFEKWCEALLVDALLGKFSI PPAPQSRSLASRSRDSSPCPSYEGKDICY CARTHLARRYFRGSFGEFSPLNHFQLFFGI LRSWHAFFRPFPWPVSWVTVYQLFLE WDFPGPIPHPHFQSV
2328	10379	A	3259	35	407	
2329	10380	A	326	163	552	AGFSLSAQKSPGAMA*YSYVVKSSKLVLK GTSKSKKSKDKKRKREDEETQLD/IVGI W*TVTNFGEISGTIAIGMDEGTIHALDN GLFTLGAPHK/ERIALKSGYGKYLGINSD ELVGHSDAIGPREQWEH
2330	10381	A	3260	3859	4052	ASCPNPKEFAPPRAGPPWFPGPLARVN PGALGGPFSGTRTPPQPLPEQRTLTSTN PWLAASV
2331	10382	A	3261	493	712	AHGRQLRKYSQQQGCWRLPFCGCHAV SGGGCGKCCSPANGPCGAAICLGFQPH NFPDPCETC/CGCHAVSGGGCGKCCISSK WSLWCSPA WVSSHTTSRIPVKLAGLPSP SFLPG

2332	10383	A	3262	51	539	
2333	10384	A	3263	742	4858	
2334	10385	A	3264	2	658	AFLRMLFPESWMETRRGAPAPPAPRSET SHDLVATLMRCTPHYIR*SNPTRPRGPET GRRTA*TRSPQVPHLQHLPTPRLVTPHP EGTQPTLPTRSSTRWNTWA*RTSGCES RLRLPPPVRQIPAEYAILTPETWPRWRGD EPRASSTCFGRSTWSPTRPDGEHQGLCQ EPRVAFPPGGGAKRKFDGFARTIQKAWR RTWLSGSTRRCGRKLPTSC
2335	10386	A	3265	1	4095	
2336	10387	A	3266	26	173	
2337	10388	A	3267	387	1443	PHRKQAEPPRHHERLGRRVRHHARHGR GSRPDTAAEAAGGCGDPRAFQQLERRL RHPPLRWQGLLRRLREEPRRSLLRP HRADAVQ*PGLPPDALPREAGWRQEGA PQHRRLQDYETCQLTWPH**GAHPTTS AALNPTRPRGPETGRRTESSTRWNTWA* RRTSGCAEPASPTA/SQFAKFLQRYAILTP ETWPRWRGDERHGVQHLLRAVNMEPD QYQMGSTKVFKNP/VVAFPPGGGARA KVRWLCPNHPEGLAAPRGCEVVRGDA/R RKLPTSC*TRRSGGATASIGTSSGTTWG WRSGPSCVSSWARRSGWTSPRSPSTA ASSPSSGT*S*RPSVCM*LGERR
2338	10389	A	3268	1	4496	MEGNVNAHRASGAQIRTCRAPPGATGC TALFKANSPEFTGLKSAQRGRGPVVGAP RKRFSGLRGHREARRTLGWGSQAPPPA AQAHTPAAGDSTLLRSAPGTCLLYAP HPQDFPPAGFLREQWWPRLTLQVFLHL RTGGRVGPVDWVLLGGGRLLGGHRMP GPCNLAEAVLLREARWPWGEAGGSEEG EPSGGSVGGNCQARPLPSAHPEAQGGV GLEVGRGMVAPAASYFADEGRPNGDHP ARQPLGP
2339	10390	A	3269	911	2827	ERKHLGWMEFSIKQSPLSVQSVVKCIKM KQAPEILAGSANGKTPSCEVNRECSVFLS KAQLSSSLOEGVMQKFNGHDALPFIPAD KLKDLTSRVFNGEPGAHDAKLRFESQE MKGIGTPPNTTPIKNGSPEIKLKITKTYM NGKPLFESSICGDSAADVSQSEENGQKPE NKARRNRKRSIKYDSLLEQGLVEAALVS KISSPSDKKIPAKKESCPNTGRDKDHLLK YNVGDVWSKVSGYPWWPCMVSAADPL LHSYTKLKQKK SARQYHVQFFGDAPE RAWIFEKSLVAFEGEGQFEKLCQESAKQ APTKAEKIKLLKPISGKLRAQWEMGIVQ AEEAASMSVEERKAKFTFLYVGDQLHL NPQVAKEAGIAAESLGEMAESSGVSEEA AENPKSVREECIPMKRRRRRAKLCSSAET LESHPDIGKSTPQKTAEDP/RRRGVGGSP PGRKKTIVSMPSRKGDAA SQFLVFCQ KHRDEVVAEHPDASGEEIEELLRSQWSL LSEKQRARYNTKFALVAPVQAEEDSGN VNGKKRNHTKRIQDPSENADLEDTPRK GLRTDKHSLRKRDTITDKTARTSSYKAM EAASSLKSQAATKNLSDACKPLKKRNR ASTAASSALGFSKSSSPSASLTENEVK
2340	10391	A	327	289	818	EPSRGVWPHEDARINGSKKKSKDKKR KREDEETQFD/IVGIW*TVTNFDEISGTI AIEMDEGTIHALDNGLFTLGAPHK/ERI ALKPGYGKYLINSDELVV/GRSDAIGPR EQWEPVFQNGACAAVFTVIGSEKQSECS LLRESRAKYHGCETHGQISSSLKQHPRWM YSHQEDLKV
2341	10392	A	3270	3	114	
2342	10393	A	3271	328	471	
2343	10394	A	3272	1	190	

2344	10395	A	3273	2	479	SGLGRLPGPWQEAGSSRGPSGDMAGV KALVALSFSGAIGLTF/LHMLGCALEDYG VYWPLFVLFFHAISPIPHFIKRVTYDSD ATSSACRELAYFFTGTIVVSCLWISPVIL ARVALIKWGAFAVLAAGNAVIFPYN RGFSLYLGRGDDFSWAEQW
2345	10396	A	3274	3	586	ARAMGISRDNLHKRRKTGGKRKPYHKK RKYELGRPAANTKIGPRRIHTVRVRGGN KKYRALRLDVGNFSWGSECCTRKTRIIDI VYNASNNELVRTKTLVKNCIVLIDSTPY RQ/WTPEEEELNKKRSKKIQKKYDERKK NAKISSLLEEQQQKLLACIASRPGQCG RADGYVLEGKELEFYLRKIKARKGK
2346	10397	A	3275	2	727	LFPASAEQMGISRDNWHKPRKTGGPRE SPYQQEAKSMSLGRPAANTKILAPRRIQ HSPVCRGG*QVNTVPLRFDVGNFSWG/S KECCTRKTRIIDVVYNAI**PSWVRYPRP LVERICIVLIDEQHPYRQWVRSPTYALP LGPQRKGAKLDSLKEEIFKPKTDLK*IQ KKYD*/ERKKNCQNSASLPGRSSFQQGK ASLRCAFK/RPGQCGRADGYMTRGHR VRSYYLRKIKARQSKINT
2347	10398	B	3276	48	209	XKNQCETRTMQENGYSSHAVDGTGPAG GAGRPAGSTGAQVSVQPNFQQDKFLGR X*
2348	10399	A	3277	2	353	
2349	10400	A	3278	3	676	SAVEFPPLSHTTGTRPRTPIILLQENGY FIHTLWMGLALLGVLGDLGQHRPRSP CQPNFQQDKFLGRWFKRGLASNSSWL EKKAALSMCKSVVAPATDGGFNLSTF LQEKTSVETRTMLALQPRGVPSASLQLTG VPHWGQA/HYSVSVVETDQYALLYT RASKGPGEDFRMATLYSRTQTPRAELK EKFTAFCKAQGFTEDTIVFLPQTDKCM EQ
2350	10401	A	3279	154	522	HVACGLLWYVSPSAHLNLDGTITTK/EN LGTVNEILLGSPTEAELQDMINEVMSD GNGTIDFPEFLTMMARKMKDITDSEGR KLAEAFRVFGLRVGNGLYLVAACRNRH VDGQTLGGGSLPD
2351	10402	A	328	213	905	YVQSLKQILS/GCI*ESIAIKKKKNKDKKR KREDEETQLDIVGIWWTNFGESGTI AIEMDKGTIHALDNGLFTLGAPHKEVD EGSPPEQFTAIVKLSDSRIALKSGYGKY LGINSDDL VVGRSDAIGPREQWEPVFK MGKMALSTNSCFIRNHEAEDIEAKSKT AGEEEMI/KGSPNLCQTFMTLPYLPEH RSLLLKIRSCAERETKKDDIPEEDKGN KQCE
2352	10403	A	3280	1	1446	
2353	10404	A	3281	774	3564	VLSKGNERSQPRSLRLLAPQLKAEAAA DKGLAPVPPPFSSGHSGPCEREQEGQRG RGRSRRGAHLELKPSGLRAGAPDRGR GGPAEVAAAGGRRMVQESQATLEERE SELSSNPAASAGASLEPPAAPAGEDNPA GAGGA AVAGAAGGARRFLCGVVEEQL MTLISAAREYEIEFIY AISPGLDITFSNPKE VSTLKRKLDQVSQFGCRSFALLDDIDH NMCAADKEVFSSFAHAQVSITNEIYQYL G
2354	10405	A	3282	51	672	VLSKGNERSQPRSLRLLAPQLKAEAAA DKGLAPVPPPFSSGHSGPCEREQEGQRG RGRSRRGAHLELKPSGLRAGAPDRGR GGPAEVAAAGGRRMVQESQATLEERE SELSSNPAASAGASLEPPAAPAGEDNPA GAGGA AVAGAAGGARRFLCGVVEEQL MTLISAAREYEIEFIY AISPGLDITFSNPKE VSTLKRKLDQ

2355	10406	B	3283	506	2416	MNPSAPSYPMASLYVVDLHPDVTEAML YEKFSAPGILSIRVCRDMITRRSLGYAY VNFQPPADAERALDTMNFVIGKGPVRI MWSQRDPSLRKSGVGNIFIKNLDKSIDN KALYDTFSAFAGNLSCKVVCDENGSKGY GFVHFETQEAARAIEKMNGMLLNDRK VFGVGRFKSRKEREALGARAKEFTNVYI KNFGEDMDDERLKDLFGKFGPALS VKV MTDESGKSKGFGFVSFERHEDAQKAVD EMNGKELNGKQIYVGRAQKKVERQTEL KRKFEQMKQDRITRYQGVNLYVKNLDD GIDDERLRKEFSFPGTITS AKVMMEGGR SKGFGFVCFSSPEEATKAVTEMNGRIVA TKPLYVALAQRKEERQAHLTNQYMQR MASVRAVPNPVINPYQPAPPSGYFMAAI PQTQNRAAYPPSQIAQLRPSRWTAQG ARPHFPQNMPGAIRPAAPRPPFSTMRPAS SQVPRVMSTQRVANTSTQTMGPRPAAA AAAAATPAVRTVPQYKYAAGVRNPQQHL NAQPQVTMQQPAVHVQGQEPLTASMLA SAPPQEQKQMLGERLFPLIQAMHPTLAG KITGMLLEIDNSELHLMLESPELSRSKVD EAVAVLQAHQAKEAAQKAVNSATGVPT V*
2356	10407	A	3284	183	3080	PRRCSTGNSGRPKIIRRAEAENEDRTL RLLPGNERSQPRSLRLLAPQLKAEAAV DKGLARVPPPFSSGHSGPCERECEGQRG RGRSRRGAHLELKPFSGLRAGAPITDRIG RGGPAEVAAAGGRRMVQKESQATLEER ESELSSNPAASAGASLEPPAAPAGEDNP AGAGGAAVAGAAGGARRFLCGVVEGF YGRPWWMEQRKELFRRLQKWELNTYLY APKDDYKHRMFWREMYSVEEAEQLMT LISA
2357	10408	A	3285	3	452	
2358	10409	A	3286	26	526	NSTDSETHPWLLSPADKTTVK/APAWG KVG AHAGEYGSEALERMFLSFPTTKTY FPHFDLSHGFCPLRATGKKVADALTKR RGAPLDDMPNALVRPLASDLHAHKLARV GPGSTFKLLKPLACLTLGPAHLRPSFT PGGCKASLGQSFLGFLKHRCLNLPNYR
2359	10410	C	3287	410	484	
2360	10411	A	3288	3	170	IRGSVLSLNFLLNTFFTP*RSFISTSVMF* KPFIFSFLMLLL*VFIFSLKILSY
2361	10412	A	3289	831	1559	IAWAFKINWLPFIIFLFSVLFYPIFGFIFFYL LYFSNTCLSLFFHFLSETLDNIFIFYLVSIF QFSSKFVHFAISFMFPSLSFFFCFILSRFKF IFFSSKKYVFIFLISLSFIFF
2362	10413	A	329	133	480	GYGRRSVKVRARCTGFSPKTPNPWV NSQHFGRLRWADHLRSGVRDQPGQHGE TSLSLKIQKLPGCGGRCL*FQLFGRLRQE N*I/RLNPGGGGCSELRSHHCTPAWVTEQ DSVSK
2363	10414	A	3290	253	414	
2364	10415	A	3291	3	225	
2365	10416	A	3292	218	602	SFLLLPRCTAEKQRWGHQQLYWHPAR KFGQGSRSICRVCSNNRHGLARKYGLN MCRQCFRQYAKDIRHLSWTKCSSFRGL SGASTSMKKPWINSFVYIIHFEKATEKK RKKNEIKRGPFCKGPL
2366	10417	A	3293	33	494	
2367	10418	A	3294	1	609	PLKRS DGCNDGRPTRPPTRPDTTVFTSNL KQTRMVHLTPEEKSAVTALWGKVNVD VGGEALGRLLVVPWTQRFESFGDLST PDAVMGNPKVKAHSKKGLRGAFS DGL AHLADNLKGTATLASELAHCDKAAPWIPE ELQAPWATCLVCVAWPITFGKRISTPPV AGLPNQENWLAWCWLNALGPTSNHLSL

						AFLAGPISN
2368	10419	A	3295	8	519	SAQMAVTTADPRVRPRVRTQLCSLASLI QTLVHLTPEEKSAVTALWGKVNVEA VGGKALGRLLVVPWTQRFLESFGDLS TPDAVMGNPKVKAHSKKVLGAFSGGP GCTWDNLKGTFAHTEVSLHCDKLRHGS LKNFRLLQRAWVSVAGPIHFWQKNFN PTSCRLA
2369	10420	A	3296	3	333	
2370	10421	A	3297	35	717	RRSSPSLLPLAERGGARARGRPERAPHP TPATRTAPPPWARRMMKLKSNQTRTYD GDGYKKRAACLFRSESEEEVLLVSIS RHPDRWVPWKEGMEARRKEAKCGKQ VREVCEGRLGVKGTGLGRLVGIFENQER KHRTYVYVLIVTEVLEDWEDSVNIGR KREWFKIEDAIKVLOYHKPVQASYFETL RQGYSANNGTPVVAATTYSVSGFRASMF RAFRWT
2371	10422	A	3298	81	426	PSFHYAVLPLHNCGLFFPSLRHRWLHSM TDDPPTTKPLTARKFIWTNHKFNVTGPQ NNMYLILPLERRFRSGSHLQHLTSKDNE EQLKHAKYGAFHVITLLFTIHYNSQLKL CD
2372	10423	A	3299	180	484	RQQAIFWHRWLHSMDDPPTTKPLTAR KFIWTNHKFNVTGPQNNMYLILPLERRF RSGSHLQHLTSKDNEEQLKHAKYGAFH VITLLFTIHYNSQLKLCD
2373	10424	A	33	200	559	KNFFLEMEF/SVLLPRLECNGVISAHRR LRLPLSSYSPASSSQVAGDYRACTTTAG* ILYF**ETGLHVGQAGLEFPTSGDQPAL ASQSAGITGVSHCPQLKKSILHETPKGLT GVTS
2374	10425	A	330	27	201	LQE*SRPSRSEAADLHGECYSS*GSTSG VVCSSRWARGLAGLRSEAADLRSEYYSS
2375	10426	A	3300	591	942	MAKTHFWDVDGSMVPEWHRWLHSM TDDPPTTKPLTARKFIWDGTIKFQRLG HPRNNMYLILPLEARRFRSGSHLQHLTSK DNEEQLKHAKYGAFHVITLLFTIHYNS QLKLCD
2376	10427	A	3301	1	508	NFALEAKNSARAISYVQTPMGHFRGG PRLTITSLWGKVNVEDAGGETPGKGS VVPWTQRFDSFGNLSAFCPSWPTP KVKAHGKVKVLTSLGDAHKSTWDDLKG HLLPKPEVNCTVDKPAMWDPENFKAPG EMLLVTRFGQSLFRQKNFTPEGCRASLG KKDG
2377	10428	A	3302	3	452	
2378	10429	A	3303	1	627	TLLVPQDSERTHPWLLSPADKTNVKA WGKVGAAHVRSMCAEALERMFLSFPTT KTYFPHFDLSHGSAQVKGATGKKVAD ALTKRRGAPLDDMPNALSSALEATLHA HKLARVGPSTSKLLKPLACLVDPGAHL PRPSSTPGGCNVFPGTKFPGLFVEAPLE PSKLPLKLSRLAIVFLPLWGFPAPPP SCTRTPVVFEIKS
2379	10430	A	3304	131	406	EAMGILKLQVFLIVLSVALNHLKATPIES HQVEKRKCNTATCATQRLANFLVHSSN NLGGILSSTNVGSNTYGKRNAVEVLKRE PLNYLPL

2380	10431	A	3305	154	1702	IGHRDPARGRSCRCSGYYSRMVCEKLAP QSEMASAGVSLRATILCLLAWAGLAAG DRVYIHPFHLVIHNESTCEQLAEANAGK PKDPTFIPAPIQAKTSPVDEKALQDQLVL VAAKLDTEDKLRAAMVGMFLANFLGFP YYMGMHSELWGVVHGATVLSPTAVF GTLASLYLGALDHTADRLQAILGVPWK DKNCTSRDLAHKVL SALQAVTGLLVAP GRADKQAIQLLSTVVGVFTAPGLHLK QPFVQGLALYTPVVLPRSLDFTELDVAA ETIDRLMQAVTGWKTGCSLTGAKADST LAFNTYVHFQGMKGFSLLAEPQEFWV DNSTSVSVPMLSGMGTTFQHWSDIQDNF SVTQVPFTD\SAFLLLIQPHYASDL\DKVE GLTFQQM\SFNWMRKLF\PTIHLTMPQL VLQGSY\DLQDLLRPGSSCPPFLHTELNL GRISGNDRIRVGEVLNSIFFELEADEREP TESTQQLNKP\EVLE\PLTRPFLFAVYD QGATALALSWGRVVGKPA
2381	10432	C	3306	223	417	
2382	10433	A	3307	3	742	HEASCRSERRRQMADFDTYDDRAYSSF GGGRGSRGSAGGHGSRSQKELTEPPYT AYVGNLPFNTVQGDIDAIKDLIRSVR LVRDKD\TDKFKGFCYVEFDEVDSLK\EA LTYD\GALLGDRSL\RV DIAEGRKQDKGG F\GF\RKGGPDDR\GFRDDFLGGRG/GLSR PGDRRTGPPMGS\FRDGPPLRG\SNMDF REPTTEERAQRTTTPALKPRTVATPLNQ VANPNSS\UFGGARPREVVQKEQE
2383	10434	A	3308	1	861	
2384	10435	A	3309	1	2076	
2385	10436	B	331	396	809	MAGCRSRALPHGEAAKAQRKVTAAGP GAKHLTAWGQQQLATPSVGAEPHTHT QNSHWPASAVCSPSSRLRLSLHTYPOAE GAGSGLGQPRKGLPQCSSLKGSSSAAK VGAQAEVPRASEACEGCQHAVTSHKY *
2386	10437	A	3310	34	657	SDGRCGRCCAPRAPRAMHMSFAIS/RCA FYQLLLAALMLVAMLQLLYLSLLSGLH GQEEQDQYFEFFPPSPRSVDQ\KAHVRT ALASGGVLDVSGD\YRVYRGLLKTMD PNDVILATHASVEQTCLHLISGLLIERW EGPAVPCSVFAAITKEEAQLATVLAYAL SSHCPDMPARIVAMHLVCPSTRYEAAPD PREPGEFALLRSCQEVFDKLARVAQPGI NYALGTNVSYPNNLLRNLAEGANYAL VIDVDMVPTEGLWRGLREMLDQSNQW GGTALVVPFAEIRRARRMPMNKNELVQ LYQVGEVRPFYYGLCTPCQAPTNYSRW FNLPEESLLRPAYVVPWQDPWEPFYVAG GKVPNFRRSGFRQYGFNRISQACELHVG GFDDEVLINEGFLVHKGFKEALKFHPQK EAENQHNKILYRQFKQELKAKYPNS\PR RRAQLATVLAYALSSHCPDMPARGHA PRVPLALRGSRARPPGAGGVCPAAVLPG GL
2387	10438	A	3311	160	441	
2388	10439	A	3312	107	691	RTAILSRMKIFLPVLLAALLGVERASSL MCFSCLNQKSNLY\CLKPTICSDQ\DNYC VTVSASAGIGNLVTFGHSL\SKTCFPCL APFPEGRSMLGV\ASMGHSAFCQSFLVAI FSCGPMAGLRGKRSPLLGARACCLSLAG RALLARFGPLDRPEPCSPDPPAQEGKPSPF WIPQCMGAPDSSRALICALGPRSG
2389	10440	A	3313	388	525	

2390	10441	A	3314	194	1131	PQHGGHFPRKIKSCSWQARPLEDEATLG QCGVEALTTLEVTRPACLEVKSMPWP VLEKVRGQTPKVAKHGEKKKKKTGRAK RRMQYNRRFVNVPVTFGKKKGTTFTKIF VGGLPYHTTDASLRKYFEGFGDIEEAVVI TDRQTGKSRGYGFVTMADRAAAERACK DPNPIIDGRKANVNLAYLGAKPWCLQTG FAIGVQQLHPTLIQRTYGLTPNYMYPPI VQATVVIPAAPVPSLSSPYIEYTPASPAY AQYPPATYDQYPYAASPATVRSFVGYS YPAAVPQALSAAAPAGTIFLQYQAPHV QPDRMH
2391	10442	A	3315	1	407	DAERQEALGIVRRIGTDTEAATEPAGAT VPAAAAAARJGTGVPQPPAMPRKRNA GSSSDGTEDSDFSTDLEHTDSESDDGTSR RSARVTRSSARLSQSSSRISRSCKSGSLL ALRSLTLPEE*PVVSSSLPQ
2392	10443	B	3316	78	316	XSYLLGQWPRDADGAFTCCTNDKATQT PLSWQELEGERRASSCAHKRSASWGSTD HRKEISKLKQQLQRTKLSRSGKEKERX*
2393	10444	A	3317	1	2319	GHPAFLEDGSPSPVLAFASPRPNHSYIF KREPPEGCEKVRVFEEATTRGKYGEGAK QETTFALTLVFIQCVINAVFAKILIQFFD TARVDTRSWLYAACISYLGAMVSSNS ALQFVNYPTQVLGKSCKPIPVMLLGVT LKKKYPLAKYLCVLLIVAGVALFMYKP KKVVGIEEHTVGYGELLLLLSLTLDGLT GVSQDHMRAHYQTGSNHMMLNINLWS TLLGMAVSCPDQGPVLVPRCPFVQALE KPS
2394	10445	A	3318	845	1343	LSLGDSAQCLLPASWCQVAGHPAFLE DGSPSPVLAFASPRPNHSYIFKREPPEG CEKVRVFEEATS/RRVLTGPFLTSCPDKN KVHFQPTGSAFCPVNLMKPLFPGMGFIF RNCPSNPGISSPGQPQATTSEGSGLQG LPTAIRAMAVAPHLQMSLCFSRAP
2395	10446	A	3319	44	498	
2396	10447	A	332	130	249	
2397	10448	A	3320	1	164	
2398	10449	A	3321	2	438	ARAARVFLHRSSLNLSNGETESVKTIV HDDVESEPAMTPSKEGTLIVRQTQSASST LQKHKSSSFTPFIDPRLLQISPSGTTVTS VVGFSKCDGMRPEAIRQDPTRKGSVVNV NPTNIRPQSDPPEIRKSGKG*L*ILGAGLW
2399	10450	A	3322	3	174	
2400	10451	A	3323	2	4978	RRTSAVSRGLLFMSFVQPLLQPPVHLLT ARVRVPGYLQIDGVKIKEHNGKLMNCF KTKMTYYFSFMKCVGLPAQLTIGFSGPSR ETGSDPRAARRGEDPQSKDRGDGLSEQT EAQRSGVHCPRSQLVGELAGQSPRTIPA ALRVCLYLLCITSYNHTSKDESSKDEEEE IKLEINMLKKYSHRNIATYYGAFIKKSP PGHDDQLWLVMFCGAGSITDLVKNTK GNTLKEDWIAYISREILRGLAHLHHHVI HR
2401	10452	A	3324	197	332	
2402	10453	A	3325	1	1788	
2403	10454	A	3326	3	111	
2404	10455	A	3327	220	423	HEELSGPYLLTFRDCFLHFWALVSKR /LALNFM*TSAPT*KALSKRNICLVNKNR NIKIPYPKKKKK
2405	10456	A	3328	273	499	RSGVRDQPGQHGKITSLLKIQKLARRGG ACL*SQLLRRLRQENRLNPGGGGCSEPR SCHCTPAWETEQDSISKIK
2406	10457	A	3329	1	1176	
2407	10458	A	333	1	3408	

2408	10459	A	3330	245	394	
2409	10460	A	3331	458	701	GPAPTRRGPAHPGAHTR**PAGTARAAC GSA*SAGTASPAHKGKGHHPGSRASGTG PGPCQRRRRSDHSSAGKWPLREASL
2410	10461	A	3332	365	814	AALRSSSENSRRHSLVKMSDKKAKDPV NKSGGQGPKRKNWSKGKSSGTSFNNL VLFDKATYDKLCKEVPNYNLITPAVGSE RLWKIRGSLGQKPFQELLSKGFIPNWFS KHRASSYFTPGITKGGDAPSLLEDGCMN RSNPPVHLEK
2411	10462	A	3333	41	565	APSPRRPWGHFTEEDKATIKNLWGKGE MWKDAGGKNPWLERLPWLSYPMGPQR FDQLLANLSLCLPIMGNPPKVKGTWPR KVLTSLGSAHKSTWDDLKGHLLPKPEV NLHCDDKPAWDPENFKAPGEMLLVTR FGQSHFRQKNFTPGGCRASWGRKMGDL ELASALVPSRYH
2412	10463	A	3334	399	592	KCIHFPGPTPKFVCGVIVVTAVP/TFGM* TVYV**LPFSILAQNVG*RDDCDPGWKL NLFYAKKKK
2413	10464	A	3335	28	312	
2414	10465	A	3336	26	417	
2415	10466	A	3337	16	3567	
2416	10467	A	3338	6385	6599	
2417	10468	A	3339	2	758	
2418	10469	A	334	3	443	SFQGGLEGEAWAGTGAAPGACGPAPV GGRRLRGPRTRPAGPTGPGQ*G/VLAPGP AAAVL/RFLTGP*LPSRSRARDREGLQLH S*SQRDHEPTGRN/GTTPDAPP*EL*HSPR RSAASLCPQAPEVSPQGSQVPALSGNSP QRLLLPT
2419	10470	A	3340	116	627	
2420	10471	A	3341	1830	2259	
2421	10472	A	3342	1	619	
2422	10473	A	3343	1830	2258	
2423	10474	A	3344	290	1377	RSFRAIGEVSIRGWGGGYAAQLQSPSR LPVLGGGKKGGSRGVGQGSRAEVGLG SQRERSGTCGAEEEEAAQLIAGTGSSL PYQGGQGNQTAIAPTCAPLSPCKAAAVI MGNIFGNLLKSLIGKKEMRILMVGLDAA GKTTILYKLLGEIVTTIPTIGFNVETVEY KNISFTVWGCGVARDKURPLWRHYFQ NTQGFILWSDSNDRERVNEAREELA MKNAGAETSLRDAVLLVFGQTNRICPN AMNAAGIQDKLGLHSLRHRNWWYIQAT CATRGNGLYEGHLWLANSVPKQEVESR TALTKHSTSPLTYLLSPCQFLPLLSMQG LARAWGIMSTLPSRTLPLTSLPFSCPI
2424	10475	A	3345	292	574	VTTENSGGQTQCGKQDRIQVPRHPARRG PPGSQY/PVTPPVPPGPLHATQLPPGPIPL GKRKAGQERRLDPRPTTCQAAAPTRSSP FCPPQKVWR
2425	10476	A	3346	3	142	TISSIIRKARKPQDLLNNYTPRSSPLRSSG RTRMYKGKNVRPGNSS

2426	10477	A	3347	1	1418	MAAALFVLLGFALLGTHGASGAGEERA RKQPCGKSRFQGHSEALATRFSAAGNTG FVQAPLSQQRWVGGSVELHCEAVGSPV PEIQWWFEGQGPNDTCSQLWDGARLDR VHIHATYHQHAASISIDTLVEEDTGTYE CRASNDPDRNHLTRAPRVKVVRAQAV VLVLEPGTVFTTVEDLGSKILLTCSLND ATEVTGHRWLKGGVVLKEDALPGQKTE FKVDSDDQWGEYSCVFLPEPMGTANIQL HGPPKIVKAVKSEHINEGETAMLVCKS ESVPPVTDWAWYKITDSEDKALMNGSE SRFFVSSSQGRSELHIENLNMEADPGQY RCNGTSSKGSQDAITLRVRSHLAALWPF LGIVAEVLVLVTIIFIYEKRRKPEDVLDAL RRCTWPGMLSCPEPLGVTEGRAGSTDA PARGLSGASADRLSSRPLFHGGGPPSSDD DAGSAPLKSSGQHQNDDKGNVRQRNSS
2427	10478	A	3348	3	896	SCRGRRRQRLEVVRGFRRGIGIMAAALF VLLGFALLGTHGASGAAGTVFTTVEDL GSKILLTCSLNDSEVTGHRWLKGGV VLKEDALPGQKTEFKVDSDDQWGEYS CVFLPEPMGTANIQLHGPPRVKAVKISS EHINEGETAMLVCKSEFVPPVTDWAW YKITDSEDKALMNGSESRFFVNSSQGR SELHIENLNMEADPGQERRCNGTSSKGL RPRPLQFLRVRSHLAALWPFGLVGEVL VLVTIIFIYEKRRKPEDVLDLDDAGSAPL KSSGQHQNDDKGNVRQRNSS
2428	10479	A	3349	870	997	KWASNTYVISSNEESMIS*LSGRQ*NLRV WRLRKTWWLNWTL
2429	10480	A	335	2	306	
2430	10481	A	3350	2	225	GILKGLYYPLATNSFPATCWRL*VSPAHS KDPRNAATVHLSFFSPSGGPRVLLGHTT WQQGLGKRGRRTQHS
2431	10482	A	3351	1	336	
2432	10483	A	3352	1193	2524	SKPPAASFAPRRPPATSRTLSAACAFRRS CRLAACSFRPLPHTDTNMNGQLNGFH EAFIEEGTFLFTSESVGEHPDKICDQIS DAVLDAHLQQDPAKVACETVAKTGMI LLAGEITSRAAVDYQKVREAVKHIGYD DSSKGFYKTCNVLVLEQQSPDIAQGV HLDRNEEDIGAGDQGLMFGYATDETEE CMPLTIVLAHKLNAKLAE LRNGTLPWL RPDSKTQVTVQYMQDRGAVLPVRVHTIV ISVQHDEEVCLDEMRLDALKEKVIKAVVP AKYLDVDTIYHLQPSGRFVIGGPQGDAG LTGRKIIVDTYGGWGAHGGGAFSGKDY TKVDRSAAYAARWVAKSLVKGGLCRR VLVQVSYAIGVSHPLSISIFHYGTSRKSE RELLEIVKKNFDLRPGVIVRDLDLKKPIY QRTAAYGHFGRDSFPWEVPKLLKY
2433	10484	A	3353	346	461	

2434	10485	A	3354	3	1632	MTEQLEPILMQAFIKSTAGLEARKLKAY RTMEYMAKSTDRSPGHILCCECGVPISP NPANICVACLRSKEDISQGIKQVSISFCK QCQRYFQPPGTWQCALESRGTFLLWCL EKNPKPLWSKVRLVDAGFVWTEPHFK RLKVKLTIQKEVMNGAILQQVFVVDYV VQSQMCMDGHESEKLDKDFWKAIVQVR QKTLHKKTFFYYLEQLILKYGMHQNTLRI KEIHDGLDFYSSKQHAQKMVEFLQCT VPCRYKASQRLISQDIHSNTYNYKSTFSV EIVPICKDNVCLSPKLAQSLGNMNIQIC VCIRVTSAILIDPNTLQVADIDGSTFWS HPFNSLCHPKQLEEFIVMECSIVQDIKRA AGAGMISKKHTLGAEVWGTEGHLEMNY RIKQYFCRTVHLGTSCNPGD\RVLGFDL AN\CNLNDEHVNMNSDRVPDVVLKKS YDRTKRQRRRNWKLKELARERENMDT DDERQYQDFLEDLEDEAIRKNVNIYRD SAIPVESD\TDDEGAPRISLAEMLEDLHFS PGCPLVKEGASMLT
2435	10486	A	3358	231	877	PKPGGYSQCRTTSSRATERNRIDYVSSA VPYLTTPDLPRPEVIVFIGRSNVGKSSL IKALFSLAPEVEVRVSKKPGHTKKMNFF KVGKHFTVVDMPGYGFRAPEDFVDMVE TYLKERRNLKRTFLLVDSVVGIIQKTDNI AIEMCEEALPYVIVLT\KIDKSSKGHLLK QVLHIQKFVNMKTQGC\FPVSAVTF SGIHLRLCFIASVTGSLD
2436	10487	A	3359	3	234	
2437	10488	A	336	243	748	PCQSFPQSGFGKDRPTSLEQRSQREROA AIFAVSQPSLVIPPGTGKSEVNADRSRPP AYCSNLGRYSGPGPPSLVIPP\GTGKSEVN ADRS\GPPAYCSNH\FPSALP**RSSMRSLS LQQTSAWTCRHFHTSFEIQ/RGGSQILTL AFCAPAGPTPRGSHVLGLAPSEALT
2438	10489	A	3360	25	546	QSGDLGGRLSRSENC\SRVVRHRVVG VMAGVLKKT\TGALVGLA\VCNTPHERLR ILYTK\LDVLEEIPK\NAA\YRKYTEQITN EKLAMVKAEPDVKKLEDQL\QGGQLAEE VILQA\EHENLAKKK*GEWKL\WEPLAV E\PPA\DQ\WKWANII\KLT\LVVFMGKLD VIKIFCYI
2439	10490	A	3361	2	367	YAGFSLSAQKCPGAMAE*SYAKSTKLVL KGTKTKSKKKKSKEKKRKREDEETQF D/IVGTIAIEMDEGT\YIHALDNGLFTLGAP HKEG\KMALLASNGCFIRCNEAGDIEAK SKTAGEEEMIT
2440	10491	A	3362	268	393	DGRRKEKWHKVERRHRPYLLSSLSQHR W*TVTNFGEISGTIAIEVDEGT\YIHALNN GLFTLGAPHK/ERIALKPGYGKYL\NSND ELVV/GRSDAIGPREQWEPV\FQNGEVNR GGPAEMGEEKRNGTKWREDTDHTSFPL FPSTGGQPKAHSNWRKVCH
2441	10492	A	3363	6	223	TVTNFGEISGTIAIEMDEGT\YIHALDNGL FTLGAPHK/ERIALKSGYGKYL\GINSDEL VGHSDAIGPREQWEH
2442	10493	A	3364	329	877	RPWKQDRRAGDPWPRTHEFRSSEASLQ ASACKKKKSKEKKRKREDEETQFDMF GIW*TVTNFDEISGTIAIEMDEGT\YIHALD NGLFTLGSS\TQRIALKSGYGKYL\GINSND ELVV/GRSDAIGPREQWEPV\FQNGACAA VFTVIGSEKQSECSLLRESRAKYHGCTH QOISSSLKQHPRWMY

2443	10494	A	3365	97	704	AGFSLSAQKCPGAMAE*SYAKSTKLVLK GTKTKSKKKKSKEKKRKREDEETQFD/ VGIW*TVTNFDEISGTIAIEMDEGTIHAL DDGLFTLGAPHKEGKMLLASNGCFIR CNEAGDIEAKSKTAGEEEMIKIRSCAERE TKKKDDFLEEDKGNVKQCEINYVKKFQ SFQEHKLKISKEDSKILKKAQKDGFLHET LLDR
2444	10495	A	3366	24	981	AIQRLGEDGGGFYRDVGCQGVFISRPLL FLRAPVLPRLTYSSRTGLSLSAQKLPGA MAEYSYVKSTKLVLKGTTKSKKKKSK DKKRKREDEETQLDIVGIWWTVTNFGE ISGTIAIEMDKGTIHALDNGLFTLGAP HKEASDEGSPPEQFTAIVKLSDSRIALKS GYGKYLGIIRDGLVVGWSDAUGPREQW EPVFKVMGKMALSTSNSCFIRIHEADIE AKSKTAGEEEMIKIRSCAERETKKKDDIP EEDKGNVNKCEINYVKKFQSFQDHKLKI SKEDSKILKKARKDGLHETLDRRAK LEADRYCK
2445	10496	A	3367	1	555	PLKRS DGCNDGRPTRPPTRPDTTVFTSNL KQTRMVHLTPEEKSAVTALWGKVNVD EVGGKALGRLLVVYPWTQRFFESFGD LSTPDAVMGNPKVKAHGKKVLGAFS GGPGCTWDNLKGTFAHTEVSLHCDKLH RGS LKNFRLLGNVLGLCCLAHSLGKEF QPHQLQACLIKKIGWLGVG
2446	10497	A	3368	1	390	WEEIQELNEVARHRPRSTLVMGIQQENR QIRELQENKELRTSLEEHQSALELIMSK YREQMFRLLMASKKDDPGIIMKLKEQHS KELQAHVDQITEMAAVMRKVPLKLTNR VARNKNEYFNLNKKTKA
2447	10498	A	3369	769	912	FPTPIPLFQELQAHVDQITEMAAVMRKVP LKLTSNRVARNKNEYFNLK
2448	10499	A	337	514	967	APACCPAAVSPFLCEPTLIHPHPDLKE DTGQKHRGAQSHPTLAGAGLAGRSSKQ PSPSAISIWHSD\GTSSCDRRQQCDRLPS ALLSPHLRCSQPATROLESS*TPPGTADL FLASSGPNPRAFSNARSVRKCKATSEKS KPKSYQGS
2449	10500	A	3370	1	463	MKKNI AFLASMFVFSIATNAYADIQMT QSPSSLSASVGDRVTITCRSSQSLVHGIG NTYLHWYQQKPGKAPKLLIYKVSNRFS GVPSRFSGSGSGTDFTLTISGLQPEDFAT YYCQHYDSLPTFGQGTKLEIKRTVAA PSVFIFPAHLMSS
2450	10501	A	3371	2	166	
2451	10502	A	3372	39	1200	FCGVAAMQLEIQVALNFIISYLYNKLPRR RVNIFGEELERLLKKKYEGHWYPEKPY KGS GFACIHIGEKVDPVIEQASKESGLDI DDVRGNLPQDLESFRIDPFVSYQIGEK GPVKVLYVDDNNENGCELDKEIKNSFN PEA\QVFMPISDPASSVSSSPSPFGHSA\A VSPTFMPRSTQPLTFTTATFAATKFGST KMKN SG/RGSSRFARTSPINLRLGMWN DLLEGRKAISSSMHSLYGLGLGSQQQP QQQQQAQPPPPPPPPQQQQQKITSALS PNAKEFIFPNMQGQGSSTNGMFPAGDSP LNLSP LQYSNAFDVFA\TYGGLNEKSFV DGLNFS LNNMQYSNQFQPCYGLTKKK KMYRTKLKCTGPRGIFFFSPP
2452	10503	A	3373	1	1197	
2453	10504	A	3374	66	632	RRDPRT PANMALRVVRSVRALLCTLRA VPLPAIAPCPPRPWQLGVGAVRTLRTGP ALLSVRKFTKQESGNNQEKSMNQLGS GNFAQAEALGDVVYCSLPEVGTKLNKQ DEIFGALESVKAASELYSPLSGEVTEINE ALVAENPGTCKTNFCYEDGWLKMTLSN PSELADELMSEEAYEKYIKSIEE

2454	10505	A	3375	162	552	VASEHSPKIGASQGLDYEPLLVVAKVWY LTRPTGTKAGSVFSQYLPFLEPGILGPAS LPWLRQTLTGKEIEIDIEPVDKVERIKER VEEKEGVPPQQQRLHLQVAKQMNDK TASWITKILRWVQSQT
2455	10506	A	3376	77	427	GRDKEGEYPPAPSSGWGKSVGIMLTELE KALNSIIDVYHKYSLIKGNFHAVYRDDL KKLLETCPQYIRKKGADVWFKELDINT DGA VNFQEFLLVIKMGWQPTKKAMKK ATKSS
2456	10507	A	3377	1	143	
2457	10508	A	3378	200	899	GKSTGPVCVHMSLCEWTL SLATRVSLSS HPSHQSHSHLLVWLFGESRPGQGLRLGH ESSAYCPGQMIPCHGIPQKVLFFRWGK SVGIMLTELEKALNSIIDVYHKYSLIKGN FHAVYRDDLKKLLETCPQYIRVRRLG WRGLSAWSWGCPGPAVL PATLHRWLCL GSL*DL*TLASSSILT KKGADVWFKEL DINTDGA VNFQEFLLVIKMGWQPTKKA MKKATKSS
2458	10509	A	3379	99	497	RESGGKRLNIYHQT VYHAKYSLIKGNF AVYRDDLKKLLETCPQYIRKKGADV WFKELDINTDGA VNFQEFLLVIKMGW QPTKKIAMKESHKGVSL L L GPKGWAL GGHVTCRIK VINTSKKKKKVDAA
2459	10510	B	338	1	456	MKLRLTAVSATALKVARLEFPFVDRM CSEFLSSGVKLQTF AVSVTALNALRLELF VPPGGLMVSLASGVKLQIFTVSVAHKS SVDPKTLGWSMGLGAVEQGAALIGEAW AAQEPMEGVGGSGMAGCRSRALPRGA AKARREIERSAGH*
2460	10511	A	3380	1	282	PLKRSDGCNDGRPTRPPTRPDTTVFTSNL KQTRMVHLATPEEKSAVTALWGKVNVD EVGGKALGRLLAVVLPLGPPKGPLKSFG GICPNSLNAG
2461	10512	A	3381	24	452	APSPDAMG/HSLWGKVNVEDAGGETLG RLLVVYPWTQRFFDSFNLSSASAIMGN PKVKAHGKKVLTSLGDAIKHLDDLKGT AQLSELHCDKLHVDPENFKLLGNVLT LAIHFGKEFTPEVQASWQKMTGVASA LSSRYH
2462	10513	A	3382	3	549	FCPRGQEFGEKNLLVPDAMGHFTEED KATITSLWGKVNVEDAGGETLGRLL VVYPWTQRFFDSFNLSSASAIMGNP KVKAHGKKVLTFLGRCQSTLDDLKGH LLPKPEVNCTVDKPAWDPENFKAPGE MLLVTRFGQSHFRQKNSPPGGCKASWA ERWVTGVASALVPSRYH
2463	10514	A	3383	347	716	REPCVSRSTCCPLPWMEPRAMCPPVGA MRGSRDPASSLSPDHLAQLQPGAGFL FCSAPALSGSFPRPSPQGHLAGSWL/ CPPVQAQOPALCGPRRGVAWVGIAW EDSGKSVGEVAS
2464	10515	A	3384	1	1362	
2465	10516	A	3385	284	540	KLFQKKNKSSCISDNFFLLAIMVNLLQ IVRDHWVHVLPVMGFVIGCYLDRKSD ERLTAFRNKSMFLKSFPHRELQPSEVT WK
2466	10517	A	3386	194	353	
2467	10518	A	3387	57	880	DPHSVSSTGGPLPIWFWPLSSGPGAVAA DPAPQSGPTVDAGVPIPHIRARDSARLP LCPWHASALELGIATPGTVTTQAPGSYP AWRSRCLLYQSPVLLASLGVLVTLG LAVGSYLVRRSRPQVTLDPSEKYLRL LLDKTVSWGRKGQEGGDQSAPGM*GT APT VVGMSKGRGSARRAW*NTCVLHPP TVSHNTKRFRFALPTAHTLGLPVGKES VEWAPFPGYPQKVTPLGSHETRCFNRF APHTISPSTWLCILQAVRCHWA

2468	10519	A	3388	430	483	NQPCLTLPTRKSECTDTVISWSLSFGFLF TRWVTGMAVLLRLSLRQAEYTHSQLLL PLDT*RLGNVVKFRGPGSGLLSYTGKGHF NIQPNKKSPEPRVAKKLGMIAGGTGTP MLQLIRAILKVPEDPTQCFLLFATQTEKD IILREDLEELQARYPNRFLWFTLDHPPK GILPISGHPTIPSSSKSKPCPFVNSGFIEINL ASHCQLGSLSAQTQ
2469	10520	A	3389	3	1007	HACAHASAHASGRLVRWGRKRRSVMGI QTSPVLLASLGVGLVTLLGLAAGSYLVR RSRRPQVTLLDPNEKYLLRLLNKTTVSH NTRKRFALPTAHHTLGLPVGKHIYLS RIDGRVRKPYTPVTSDEDQGYVDLVK VYLKGVQPKFSEGKMSQYLDLSKVG DVVEFRGPGSGLLTGKGFHNIQPNKK SPPEPRVAKKLGMIAGGTGTPMLQLIR AILKVPEDPTQCFLLFANQTEKDIFAGG LKRNLQARYPNRFLWFTLDHPPKDW YSKGFVTADMIREHLPAPGDDVLVLLCG PPPMVQLACHPNLGQTGVTSQKMAISP Y
2470	10521	A	339	1	1519	MAPELSSKEQPGSEWKKACQMEGTVCA KAQRDLLDGFQDQADDDMDNEIQAEM VSDGDEELVGNWSKEPTTLGAATMGLG TEKQLGMGWAGRKGPIEDLEPLPQAAC KLHAVAHTTWEAVQCGSLPRRNSNLL LEQGVLEETRNLQEHGGEIDLEKKRWL GTVAHTCNASTLGGRGVKLQFTVSTIA PKAARLELFVPPGGLVLLASGVKLQIF AVSVTAHKSSVDPKTLGWSMGLGAVEQ EVVLVGEAPAAQEPMEWVGSGMGAA GPGALPRGKAARREIEHSAGLYKLLP HSEYSRPNRVFPNSQGSNPVRVSFVNLN DQSGNGDRLCFNVGRELYFYTYKGVRK TIP*GCRTEILISVLTEADLSKPIDKRIY KGTQPTCHDFNHLTATAESVSLVGFSA GQVQLIDPIKKETSKLFNEEAFEGRYATF FTI/WYECSHGKLHISSALGLVFFGGDISY SLSSQPAPLEGASRDSGSRGHELWSESSR KRNNKRH
2471	10522	A	3390	2568	2781	RSPGRPPHDPNPAPV/RRPASCHS/AAESQ HGGWKKSKISASRKLQKTLTLLQIAKQE/ LEREAERRGEKGRAL
2472	10523	A	3391	2	409	
2473	10524	A	3392	3	490	SSPEETVGPWDPEGHPGGPLTDPPNPAPV LALPPAIPGLSLIMADGSSDAVRAAG*GV AGTPRARAREPRPAPAPIRRRSSNYRAY ATEPHAKKSKISASRKLQKTLTLLQIAK QELEREAERRGEKGRALSTRCQPLELA GLGFAELQDLRQLHARVDK
2474	10525	A	3393	2023	2613	
2475	10526	A	3394	150	848	VSAWRNGSSDAAREPRPAPAPIRRRSSN YRAYATEPHAKKSKISASRKLQKTLTLL LQIAKQELEREAERRGREGARSLAPRC VQPLELAGLGFADLPGLCCRQFHARVD KVDEERYDIEAKVSKNITELANLTQKIF DLRSKFKRPTLARRVRISADAMMQALLG ARAKESLDLRAHLKQVKKEDPEKENRE VGDWRKNIDALSGMEGRMKKWRELSLP AYCPCPEEGH
2476	10527	A	3395	1	2880	

2477	10528	B	3396	61	5070	MGPTSGPSLLLLLLTHLPLALGSPMYSIT PNILRESEETMVLEAHDAGQDVPVTVT VHDFPGKKLVLSSEKTVLTPATNHMGN VIFTIPANREFKSEKGRNKFVTVQATFG TQVVEKVVLVSLQSGYLFQTDKTIYTPG STVLYRIFTVNHKLLPVGRTVMVNENPE GIPVKQDSLSSQNQLGVPLPSWDIPELVN MGQWKIRAYYENSPQQVFSTEFVKEY VLPSFEVIVEPTEKFYIYNEKGLEVTI
2478	10529	A	3397	3	560	EGKGQGTLSVVTMYHAKAKDQLTCNKF DLCLPGSRQKVEVFLGPCLQPGTFLWSR NRRVLGFPSMNGEDMGLLFLCSEWERS EGWLCNREGGSGHSIEPHCCTFLHLTHR SLAFSLLAGVSCTCASSCKCKEICKCTSC KKSECGAISRLGLWLKVGREP KAVPEV RASGEPAFLCPCRLSLPV
2479	10530	A	3398	3	1584	SNQPLRREAFPETPKGLRQGPGEENG RSHFFSFDVTAVMILYKESQALTGNLPG PQLPRRLRAAGRGHPSVPAPSRRGALS RFPASGRSAVPTIGWLCRSHYPHSIRGAN GWRQELVRASHTMSATAQTNHRAEK AGRELSQANNDRTGRLAHPAPPPSQARQ VPRLEHLASPRCWPAPVISRPFERSWHCIL EIRFRKGKLGGRASPENEGAGEIRVKVP KDRDWLTAKLQGDLLTVSQTAKLEDMV LQTAKSTQDFLTPTARSYSPTTKLKGV NTKSPTLLTPTARGRHYLLGAPIASWRC HTSTIRYHTVVVMSMTL TESEHQAGSVD MSANDYAHYSGASGDNEMCVVIACPTP LFLSPRAWKPCDAGSKVKNWGIENG VHTVLSSTQHGDPEHVHAPFGMEAAYA HPLETILGTGFFIGIVLLCDHVILLWAW VTIRLLETIDVHSGYDIPLNPLNIPFYAG SRHHDFFHMANFIGNYGFQHFTRWDW NFLGTDSQYNAYNEKRKKFEKTE
2480	10531	A	3399	2	873	GRVGEMSQGRKYDFYIGLGLAMSSSIF IGGSFILKKKGLRLARKGSMRAGQGGH AYLKEWLWRAGLLSMGAGEVANFAAY AVAPATLVTPLGALSVLVRILSSYFLNE RLNLHGKIGCLLSILGSIVMVIHAPKEEEI ETLNEMSHKLGDPGFVVFATLVVIALIL IFVVGPRHGQTNILVYTICSVIGAFSVSC VKGLGIAIKELFAGKPVLAGIPWAWILL LIVCVSTQINYLNR/PWDIFNTSIVTPIYY VFFTTSVLTCSAILFKGVGKDMPPVGRCP LVL
2481	10532	A	34	2583	3580	DRVSLLLPRLECNGAILAHCNLCLSGSSD SPASASQVTGITGKCHHTQLIFVFLVEMG FHHIAQAGLELLTSDSPTLASQSAGITGV NHHAWLFFFCSDTVSLCYPGWSRVA* SRITATSA/PGLK*FACFSLPSSRDYRHVP PHPGNFCIFGRDEVSPCWPGWF*TPDLR/ YPPASASQSAEIIIGVSHHTWPQEVFLFN LFIYLRWSL/DSVAQARVQRRDLGSLQA PPPRFKPFSCSLPSSWDYRRPPHPANFF VFLVETGFTVLARRVLIS*PRDLPASASQ SAGITGVSHHTR/LIF/NFFETGTHSVTWA AVQWYTI/GSLQPRTPELK*SSHLILTSN WDYRCTPPCPPNLFIYLFYFHRDEGSLC CPGWS*TPELK
2482	10533	A	340	759	1034	
2483	10534	A	3400	90	458	HFSRGYLEAFSEISNIRFVPPHSVTVVVV FGACFLCILGIWPWACLPGPGGEGSGGF GEGRGSEAGRLGSELTPATLPLQAPEA YPVFEPVPPVPEAAQGDTESEGAPPLK RICPNAPDP

2484	10535	A	3401	3	787	PGSTISWRPGLARSLSPDGRRPRRGLGP GPSPASMAGR TVRAETRSRAKDDIKKV MATIEKVRRWEKRWVTVAATPFRILNW VAIVDPQEEERVRAGGGAERSRGRE RGRGASPDGGG/PLFILLDLNDENSNQR FPLRKGS LQRGTEVSPGGTPKPNRPCVT LPDPPEGGPCTRAQPPT/RLGQEERSPGGI TVGSTDEPPMLTKEEPVPELLEAEAPEA YYPVFEPVPPVPEAAQGDTEDFGSAPP LK RICPNAPDP
2485	10536	A	3402	1	172	
2486	10537	B	3403	1	5501	MVSKLSQLQTELLAALLESGLSKEALIQ ALGEPGPYLLAGEGPLDKGESCGGGRGE LAELPNGLGETRGSEDETDDGEDFTPI LKELENLSPEEAAHQKAVVETLLQEDPW RVAKMVKSYLQQHNIPQREVVDTTGLN QSHLSQHLNKGTPMKTQKRAALYTWYV RKQREVAQQFTHAGQGGLIEPTGDELP TKKGRRNRFKWGPASQQILFQAYERQK NPSKEEREAQGLGSNLVTEVRVYNWFA NRRKEEAFRHKLAMDTYSGPPPGPGPGP ALPAHSSPGLPPPALSPSKVHGVRYGQP ATSETAEVPSSSGGPLVTVSTPLHQVSPT GLEPSHSLSTEAKLVSAAGGPLPVSTL TALHSLEQTSPLNQPPQNLIMASLPGV MTIGPGEPASLGPTFTNTGASTLVIGLAS TQAQSVPVINSMGSSLTTLQPVQFSQPLH PSYQQPLMPPVQSHVTQNPFMATMAQL QSPHALYSHKPEVAQYTHGTLLPQTMLI TDTTNLSALASLTPTKQVFTSDTEASSES GLHTPASQATTLHVPSQDPAGIHLQPA HRLSASPTVSSSSLVLYQSSDSSNGQSHL LPSNHSVIETFISTQMASSSQ*
2487	10538	A	3404	158	755	RGGRPAWPCGSRAMVSKLSQLQTELLA ALLESGLSKEALIQALGEPGPYLLAGEGP LDKGESCGGGRGELAELPNGLGETRGSE DETDDGEDFTPI LKELNLSPEEAAHQ KAVVETLLQEDPW RVAKMVKSYLQQH NIPQREVVDTTGLNQSHLSQH/HQQGHS HEDAEAGRPVHLVRPQAARGGA AVHPC RAGRAD
2488	10539	B	3405	133	2369	MVSKLSQLQTELLAALLESGLSKEALIQ ALGEPGPYLLAGEGPLDKGESCGGGRGE LAELPNGLGETRGSEDETDDGEDFTPI LKELENLSPEEAAHQKAVVETLLQEDPW RVAKMVKSYLQQHNIPQREVVDTTGLN QSHLSQHLNKGTPMKTQKRAALYTWYV RKQREVAQQFTHAGQGGLIEPTGDELP TKKGRRNRFKWGPASQQILFQAYERQK NPSKEERETLVEECNRAECIQGVSPSQA QGLGSNLVTEVRVYNWFANRRKEEAFR HKLAMDTKVHGVRYGQPATSETAEVPS SSGGLVTVSTPLHQVSPTGLEPSHSLLS TEAKLVSAAGGPLPVSTLTALHSLEQTS PGLNQPPQNLIMASLPGVMTIGPGEPAS LGPTFTNTGASTLVIVPTLDQSLCYISDT WVNQTDQNLSSSREAGTKHNTSILWY LRRPGLHAGTECAGHQHQHQQPDHLQP VQFSQPLHPSYQQPLMPPVQSHVTQSPF MATMAQLQSPHX*

2489	10540	A	3406	1	2112	MMLKGKAHCSILDFGLDQCSTNSAAE FIRSWEDPWVAKMVKSYLQOHNIPQR EVVDTTGLNQSHLSQHLNKGTPMKSQK RAALYTWYVRKQREVAQPHIPIPIENS TGTEWLIELTWLDPHAKNDQEHRTDSP VNYGKKKGKENKNLKPPEVYVSLIKA CGGPGNFCPSFSELQRNFVKHRPTKLKS LLRLVKHWYQQWLQPHREWKEEVLDA VRTVEEFLRQEHFQKRGLDQDVRVLK VVKVGSFGNGTVLRSTREVELVAFLSCF HSFQEAACHHKDVLRLIWKTMWQSQD LLDLGLEDLRMEQRVPDALVFTIQTGT AEPITVTIVPAYRALGPSLPNSQPPPEVY VSLIKACGGPGNFCPSFSELQRNFVKHRP TKLKSLLRLVKHWYQQYVKARSPRANL PPLYALELLTYAWEMGTEEDENFMLDE GFTTVMDDLLEYEVICIYWTKYTLHNA IIEDCVRKQLKKERPIILDPADPTLNVAEG YRWDIVAQRASQCLKQDCCYDNRENPI SWNVKRARDIHLTVEQRGYPDFNLIVN PYEPIRKVKEKIRRTRGYSGLQRLSFQVP GSEKQLLSR\CSLAKYGIFSHTHIYLET IPSEIQVFVKNPDGGSYAYAINPNSFIL GLKQQIED\HQGLPKK\QQQLEF\QQQVL QGLVGWVGIFYGIQD\SDTL\LSKKKGE ALFPAS
2490	10541	A	3407	108	442	ALLSWEMSAACWEEPWGLPGGFAKRVL VTGGAGFIR*WRR*PSSGSPETPTFSRSS ACPSASHMIVSLVEDYPNYMIINLDKLD YCASLKNLETISNKQNYKFIQGDICDS
2491	10542	A	3408	115	1196	ALLSWEMSAACWEEPWGLPGGFAKRV LVTGGAGFVSASHMIVSLVEDYPNYMII NLDKLDYCASLKNLETISNKQNYKFIQ DICDSHFVKLALFETEKIDIVLHFAAQTHV DLSFRTCPWSFTHVNV/YMGTHVLVSA HEARVEKFIYVSTDEVYGGSLDKFDES SPKQPTNPYASSKAAAE\CFVQSYWEQY KFPV\ITRSSNVYGPHQYPEKVIPKFISLL QHNKCCIHGSLQTRNPLYATDVVEAF LTVLKKGKPGEIYNIGTNFEMS\VVQLAK ELIQLIKETNSESEMENWVDYVNDRPTN DMRYPMKSEKIHGLRWRPKVPWKEGIK KTIEWYRENFHNWKNVEKALEPFPV
2492	10543	A	3409	359	532	IVMCHCLELVIGEPCHCEGVCVCVYA AVCVLCVCVHTCICFGACV/CVCVCRRV CPVCLCTYLYLLWGLCVVCYQRVNFWK
2493	10544	A	341	587	1097	QKIINKVVPITGRQCCFVRLSPLESKLFQS KEEIRNTSHRANVTKRNSANRKTDAILA TPGPPPAQPHGA/PGGYAPRLPQHPAPGC FPKCGNPAPRPWYGFSGPLLRKEQKRN PRKGTG*MQGVSPVPFPPT*NAGPLPGGS LGPPISGHFLVSHTWPPPPRSPTAPP
2494	10545	A	3410	27	1389	GQPRSQQGAGSWGKRRQESYRAREGDG GSGSLTGLLRTAAGWLLPARASPRERAT RHPVRSPPQRRARRSLQRGPERPRRDPPQ TAWAARMCTKMEQPFYHDDSYTATGY GRAPGGLSLHDYKLLKPSLAVNLADPYR SLKAPGARGPGP\EGGGGGSYFSCQGS TGPSLKLASSELE\RLIVPNSKTA\TTTTPT PP\GQYFYPRGGGSGGGAGGAWGGVTE EQEGFADGFVKALDDLHKMNHVTPPNV SLGATGGPPHGP/GIRASPEPPPVYTN LSSYSPASASSGGAGAAVGTGSSYPTTTI SYLPHAPPFAGGHPAQLGLGRGASTFKE EPQTVPEARS\RDATPPVSPINMERPRAPS KLEPSGLRNRLAGHQ\SAGKR\KLRKFAR LEDK\KTLKA\ENAGPVEVPPGLPPGSR LAQAQTRKVIDPRVSNGLSSLLFGVIRGH AFLNVPCPL

2495	10546	A	3411	1	3589	IRRPLDQRGGIPLRKKPLEDLVCKLADISI NYVNERKSEQHLRFLSTLLDSFSSSRVFK MLLGDEKQSIVQAKPLEIAKL VQKNPAV QFLYQKLGWLNEDQVRKDFGLVDILYS ALRCCDNDMERKKVLDLTKVDLKWN SLLKIEKACPSSDKHALVTPWLKGDILG EKLVLNADCLCNEDLESRVSSSHFSE WTLSSLVLSQHVKN DY LIGDVYVERIIV RLHETLFTKTKLSEAESSDSSVSFICDV
2496	10547	A	3412	112	828	PVFKTPLPSHRAHAAALDLLGASSSDP HADSGTGNWAEVDPGSAQHLPRSSQLP HFLSGGGPGQCRRGQRGELLPSGGTA TPCAPRGLGWGLRSCALRAAAPPTAPQ TLRRAPRPAPRAGPLAPQPSISRDFL GQAACASGTMLRWLRDFVLPTAACQDA EQPTRYETLFQALDRNGDGVVDIGELQE GLRNLGIPLGQDAEEVGRRRGAA*A*GG LRALGTLRGPRRAAA
2497	10548	A	3413	1	1413	RDARRYSGTTPHPSISRDLLQAVCASG TMLRWLRDFVLPTAACQDAEQPTRYET LFQALDRNGDGVVDIGELQEGLKNLGI LGQDAEEKIFTTGDVNKGKLD FEEFMK HLKDHEKKMKLAFKSLDKNNDGKIEAS EIVQPLQTLGLTISEQQAELILQSIDVDT MTVDWNEW RDYFLFNPVTDIEEIRFWK HSTGIDIGDSL TIPDEFTDEKKSQWWR QLLAGGIAGAVSRTSTAPLDR LKIMMQV HGSKSDKMNIFGGFRQMVKEGGIRSLW RGNGTNVIAPIETAVKFWAYEQVMKT RLAVGKTGQYSGIYDCAKKILKHEGLGA FYKGYVPNLLGIIPYAGIDLAVYELLKSY WLDNFAKDSVNP GVMVLLGCCALSTC GQLASYPLALVRTRMQAQA MLEGSPQL NMVGLFRRIISKEGIPGLYRGITPNFMKG LPAVGISYVVYENMKQTLGVTQK
2498	10549	A	3414	1	222	
2499	10550	A	3415	2	528	SRVDPRVRHSARLTMCHSRISCHPTMTIL QAPTPAPSTIPGPRRGSGPEIFTFDLPPEP AADPAGRPSASRGHRKRSRRVLYPRVV RRQLPVEEPNPAKRLLFLLLTIVFCQIL MAEEGVPAPLPPEDAPNAASLAPTPVS PVLEPFNL TSEPLDYASWNLSTFLQQH AAF
2500	10551	A	3416	1623	2346	TFPSGAKPPLAASHHHRHLRDASRLWRG RSGGPSVTRRPTFLPSYPPAPAHAPASAP GPSVSDCSPFSSRRRSPTRTDCFVCRPVC PFFTVPPGRAPSRMAEVLLLLLLSLPSA AAKIQGYPCPGPQLSRDILSSGDGWWA GLSGHHRVCGGPGVQEPQTTVVHNATD GIKYIHHRLIHLTPADYDDFVNARSARS AFCLTPMGM MQFN DILQNLKRSKQTKE LWQRVSLMATFSP
2501	10552	A	3417	256	657	KGLSLSKKAGENHYFYLPHSFPEKAPPG AIGHLSPRG TIEEALDLSARIVA EFTVLP ASHHPRHLRDASRLWRGRSGGPSVTRRP TFLPSYPPAPAHAPASAPGPSVSDCSPPF SRRRSPTRLARMRGLLGF
2502	10553	A	3418	294	573	SHLLGLHEPSRHN RASPGSLFCTHRRGIH SASSKPSSPTSP*CKSPRPSGAAPRRG*L E*AGLLGFSTGFRGFNRRARRPRRLGVAI AHQAP
2503	10554	A	3419	1	931	

2504	10555	A	342	462	1238	SFYETKLLISGSETLDSKDQYRINKYNH YFQTLHYTIHLKFSSGLSSATQ*KLWSK GNG*GERPVSPPLMAPSGQLLAHVWS EVKSVSSCFLSCQQGHVLTSPGSSFPQCO PAQCYLIPCSSEKYTNGW/PGPIPSLGIQ SS/SSPGS*SGPISSSKYSGDAQVCFSSPNL FPSFRPVTGCIQSPPNISPGAEGCGLQPI PVHSFLTPSTFSPVSP*RSRSTHPETHS MSHSSQSSPQAPSALPPSISLPLSP
2505	10556	A	3420	640	757	
2506	10557	A	3421	865	1314	TPLPSTTPPKQPNPRGPGSGAESLETEEEEE EEEEKGSERPPPPGRRSRSLRPPAIRWRRGD PAGQ/QETGPPKLRP\WDGAEAGVAIGH AAAFPH/ITEGPRLVPLGGVRLTPSPVTL LRTGAGLLHYERLWNLVGP/CLHPRQ DHTLGLGSWG
2507	10558	A	3422	2	310	ARDVHPLPLPFLGNSLALGMQMRPQL LLSRCRLPATCASSCKCKECKCTS/TAR KKSCCSLNPCLVPCAPRACICKRGHR RSASLLRLMTGTALLPTYK
2508	10559	A	3423	41	317	LLKFFETGSHSFIQVGVQWCDHDSLD LPGSGDPSS/AS/RVAGTAGMHDHTWLIF VFLVRRWSLTVLLRLVFNSWAKVILHL GLPKGWGLQV
2509	10560	A	3429	781	949	LLCLGLAYRRHFEMSLWLGMAHVCNP SAWGGRGGQIT/R/GQEFETSLVNMVKT CLY
2510	10561	A	343	2	384	
2511	10562	A	3430	3	1029	RAFRFDDTMAGGGCRAGPGATCSGDGA GSDQRQNEEIEAMAAIYGEEWCVIDDCA KIFCIRISDDIDPTWTLCLHVMLPNEYYP CTAPPIYQLNAPWLKGQERADLSNSLEEI YIQNIAESILYLWVEKIRDVLIQKSQMT PGPDVKKKTEEDVECEDDLILACQPESS LKALDFEVSEARTEVEVEELPPIDHGIPIT DRRSTFQAHLPVVCVKQVKMGLSKLY ENKKIASATHNIYAYRIYCEDKQTFLOD CEDDGETVAGGRLLHLMEILSVKDVGMG VRARWYVGMGLGPDRFKHINNCVARNIL VEKNYTSSLEESSKALGKNKKVRKDKK RNEH
2512	10563	C	3431	153	224	MVAHACNPSTLGDGRGGRFTRSGD*
2513	10564	C	3432	20	58	MTQLTKRKETIL*
2514	10565	A	3433	837	1125	LDVTTSKNQFVLRWTLKIPGNCYRRHFF FFETESCSVAQAGVQWHNLSLQAPPPG SRHSPTSASQAAGTYRYPAHHAWPNFV FVFLVETGFHPC
2515	10566	A	3438	56	290	
2516	10567	A	3439	468	993	VLLACFWPGSDFWPRSRRKTYGTAPQSC YSFYVALDCGGVSRLVIFVSWRNPQVAP TSAHQNRPSRNPVSRPPNTQRVARRKHY ALADGYTERRWTNAPCRAESSFPNCPS AAPIPDSYDK*PSRATLFTSHLTVEAFPV WSYLYPGETPRLHPRAHTRTPAAIRYP DRQTPNGLRGANTMHSQMDTLNGDGR THLAGQRARSPTARPQRYRIHTTSDL PGLVRKYASGCCLRWYCCAWIERALS QVGGGVFGDPLSEGQAECDHGST
2517	10568	A	344	2	624	SDSRASCKMLLILLSVALLALSSAQNLE DVSQEEPSLIAGNPQGPSPQGGNKPQGP PPPGKPPQGGNKPQGPQGGNKPQGP PPPGDKSRSPSPGKPPQGGNKPQGP GPPPRGGIKPPQGGNKPQGGNKPQGP SQSARAPPKPPQGGNKPQGGNKPQGP AGGNPQPPQAPPAGQPPQGGNKPQGP SRPPQ
2518	10569	A	3440	1	3114	

2519	10570	A	3441	3	401	TSSLSLSGKSGRYTVFLRRSVGIQSPSAVA TVRLLLAGSDRRFAAGSAGCAVLSRAER S*EPGCCYRIRRSARLRAGSIGNRDKPV AWPDTGSGDNTEVYFRAHQAGILPDTVL AGPAQRVAVSGGTPVDW
2520	10571	A	3442	2874	3062	
2521	10572	A	3443	2766	3323	MPDLVEGREKSDKGAQPQRTQSRSA RTNGSGVRILHSLWRIIGIPLLLGYSLVCS RVLLACFWPGSDFWPRSRRKTYGTAPQSCY SFYVALDCGGVSRLVIFVSWRNPQVAPT SAHQNRPSRNPVSRPPNTQRRARRKHYA LADGYTERRWTDAPCRAESSFPNCPL* RQYRIHIVDASVCGP
2522	10573	A	3444	968	1440	
2523	10574	A	3445	3	640	LSVVRSRIHMGVGVGVGCPVRYRNQDD HELQITHGNKILCGIVCDKGAQPQRTQS RSARTNGSGVRILHSLWRIIGIPLLLGYS LVCSRVLACFWPGSDFWPRSRRKTYGT VPQSCYSFYVALDCGGVSRLVIFVSWR NPQVAPSAHQNRPRRNPVSRPPNTQ RRKHYAPADGYTERRWTIAPCRAESSFP PNCPSAAPIPDSYDK
2524	10575	A	3446	1	3140	MVYKMRYRSQHPYSIKEQMKSEVLSV KEKIGYGMGDAASHIIFDNVMLYMMFF YTDIFGIPAGFVGTMFLVARALDAISDPC MGLLADRTRSRWGKFRPWVLFALPFG IVCVLAYSTPDLMSGKMIYAAITYLLT LLYTVVNIPYCALGGVITNDPTQRISLQS WRFVLATAGGMLSTVLMPLVNLIGGD NKPLGFQGDLSPMFSTPEEIARPGPYEND VHVVGASSLAAGHKTLIPELVRSAEQHM GTR
2525	10576	A	3447	750	1340	ILHAPAPPFSASASHEQPEWSDKGAQPQ RTQSRSA RTNGSGVRILHSLWRIIGIPLLLGYS LVCSRVLACFWPGSDFWPRSRRKTYGT APQSCYSFYVALDCGGVSRLVIFVSW RNPQVAPSAHQNRPSRNPVSRPPNTQ RRARRKHYALADGYTERRWTNAPCRAE SSFPNCPPFAAIPDSYDK*PFRIVS
2526	10577	A	3448	93	699	RASVQKKLSTDDKGAQPQRTQSRSA RTNGSGVRILHSLWRIIGIPLLLGYSLVCS RVLLACFWPGSDFWPRSRRKTYGTAPQ SCYSFYVALDCGGVSRLVIFVSWRNPQ VAPSAHQNRPSRNPVSRPPNTQRRARR KHYALADGYTERISATNAPCRAESSFP PELPVPQVPNTGFIRQVTRDCFVNTPQAA ASGFW
2527	10578	A	3449	1000	1530	QRYSDNPPNDKGAQPQRTQSRSA RTNGSGVRILHSLWRIIGIPLLLGYSLVCS RVLLACFWPGSDFWPRSRRKTYGTAPQ SCYSFYVALDCGGVSRLVIFVSWRNPQ VAPSAHQNRPSRNPVSRPPNTQRRARR KHYALADGYTERRWTNAPCRA/VEFP PPNCPPWEAQYRIIRK
2528	10579	A	345	85	194	
2529	10580	A	3450	106	375	
2530	10581	A	3451	232	376	KKGVLSCVRRHSMET*NEKPALLKMSGI KIPSPVHHFVFKQSEKGA
2531	10582	A	3452	481	781	IKDKKVSNOQLCGYLVAMTDVETTYA DFIASGRTGRRNAIHDLVSSASGNSNEL ALKLAGLDINKTEGEEDAQRSSTEQSG EAQGEAAKSESLTPHF
2532	10583	A	3453	15	369	RVGEYDGYEAGPAPCPPRASLCQ/PGPD QGPPSCTQAIPAPRKPHPCPWPQGP PKKL GELPGLCLQGSPTAGHPCCPQETGAQ GAPASPWFSQNNACGLICFCPPQPRIFL CINSNS

2533	10584	A	3454	201	711	KKMARTKQTARKSTGGKAPRQTAG/LA TKAARKSAPSTGGVKKPHRYRPGTV REIRRYQKSTELLARKLPFQRLVREIAA GFSKTALRFQSARIRCACRRLLAKRYLVG LFEDWNLCAIHAKRVTHAPKTIQLARR DTGEKRALSEGSFYGVLLVKFLLKYFGLI C
2534	10585	A	3455	758	1188	GKLSGRGTGSLLRGDALPRLQKTGCPKA GGNRPPAVSQSRGGAVRDEGLLAAQTA EGGPRVEEARPPQLPQARGSLPETPPPPA PDAITPPPPSGSHISPSSAEGPSRPPVAV DSGGAPQPQDPGPAPAPALLRHRHQT RP
2535	10586	A	3456	2	297	
2536	10587	A	3457	1	1128	
2537	10588	B	3458	58	1282	MRTLLKNTVIVLLPYKGSGLYGESSTE LNVEVLNCTASQFKCASGDKCIGVTNRC DGVFDCSDNSDEAGCPTRPPGMCHSDEF QCQEDGICIPNFWECGDHPDCLYGSDEH NACVPKTCPSYFHCNDNGNCIHRWL DRDNDCGDMSDEKDCPTQPFRCPSWQW QCLGHNICVNLSVVCDFDCPNQGMSP HFALVAAVDWLSQDSKWLQDSHIVPD VKLCVVASAYRQSYQSLGNDISLGYRCQ PKFSRSIDPTGKAVQTADIRLSARATLWL GGSIEESPVLCSTLRLLRRLPPPLTWTS NRPTQPCTAQTQTNQSVGIAAPSAIRVIY PESVVLNAVIVLPDPEVSGLPRAFKR SVEVRLDCGTFKLLLVYCTHPGDIKNT CKTGALVAFRCFLPX*
2538	10589	A	3459	1	1870	MGKVPMRSEKPAHEVRASTISTPDLSSI ESFFSRGPSTNHTSIKGRPLTAEKNT NRAEEKIKKEELAISGVDEDDGGKGIKD TGDLVEMVDLAFRCDRHNDGCDYS GCLYQTCQQNQFTCQNGRCISKTFVCDE DNDGCGDGSDELMHLCHTPEPTCPPEFK CDNGRCIEMMKLCNHLDDCLDNDSEK CGEFIFRASSPGAILILIVASTIHAI LGNALPVRRIQVQYSWPTLTKLWASR VSNCQGLLSAAKTHHTVQFSILMALPKG HLFSARLTGKCAVQVIVEGFFAGRDKFV CVLNVAFPVYQFVLSLVRTGTASKSTVG FYRNNISVITGFLIGFLCQSSALDLETFV VSHFYFGINECHDPSISGCDHNC FYCSCRPGYKLMSDKRTCVDIDECTEMP FVCSQKCENVIGSYICKCAPGYLREPDG KTCRQNSNIEPYLIFSNRYLRNLTIDGY FYSLILEGLDNVVALDFDRVEKRLY TQRQVIERMFLNKTNETIINHRLPAAES LAVDWVSSALKGGFVHPNLNGGSQHFTL LVD*VIKWLYLISNSVPC*KRRWGLPVF WFGGKREMSWEMMGH*LVEGLCGCCH
2539	10590	A	346	617	711	
2540	10591	B	3460	1	2973	MEKQSINQQLPYPDQLPTQCSPLTGLNE YPLSGVSIPDESDDRKSCHSAAMTLRQV HQRHQNNFLDHNTNVEEYSAQMRIGT HCCCTSESLLLLVASQNKIADSVTSQV HNIYSLVENGSIYAVDFDSISGRIFWSD ATQGTWSAFQNGTDRRVVFDSSILTET IAIDWVGRNLYWTDYALETIEVSKIDGS HRTVLISKNLNPRGLALDPRMKLLYFM DSYLDYMDFCDYNGHHRQVIASDLGF EV

2541	10592	A	3461	257	3561	RHKKPFKKSMNPGAG/MLYWSOQGTDS GVPAKIASANMDGTSVKTLFTGNLEHLE CVTLDIEEQKLYWAVTGRGVIERGNVD GTDRLMILVHQLSHPWGIAVHDSFLYYTD EQYEVIERVDKATGANKIVLRDNVPLNR GLQVYHRRITEP/CPN*PKTIKIGHYIKDK PTCSSE/AKWYLPHPGQM*IA/DKPEAQR GSRRLTDLEGGNNEIDWSISCDCIYPSQ VFDLSAKIEGKVDKRTCCPSSFPKGYGPI
2542	10593	A	3462	1	10725	MAGAPPPASLPPCSLISDCCASNQRDSVG VGPSEPGVGYSLVVRRFLSRSEKRNIRV GVTRFSRELPDPLRFPEHLFFTDWRLGAI IRVRKADGGEMTVIRSGIAYILHLKSYDV NIQTGSNACNQPTHPNGDCSHFCFPVPN FQVCGCPYGMRLASNHLTCEGDPNTNEP PTEQCGLFSFPCKNGRCVPNYLDCDGV DCHDNSDEQLCGTLNNTCSSAFTCGHG ECIPAHWRCDKRNDCVDGSDHNCNP T
2543	10594	A	3463	3	14105	SWRRCRPKGAFASRGAAGAVCYARPPP GEGTARPGTIAEMDRGPAAVACTLLAL VACLAPASGQECDSAHRFCGSGHCIPAD WRCDGTDKDCSDDADEIGCAVVTCCQGY FKCQSEGQCIPSSWVCDQDQDCDDGSDE RQDCSQSTCSSHQITCSNGQCIPSEYRCD HVRDCPDGADENDCQYPTCEQLTCDNG ACYNTSQKCDWKVDCRDSSDEINTEIC LHNEFSCNGECIPRAYVCDHDNDQD GSDEHA
2544	10595	A	3469	2	230	WQDFYCQ*HIFGAAFFTHPDGPSNWA FNFVMFCHCLPKCWDYRGESPRPAHF KIFVDQCTVVKKKKIRKIKNKFL
2545	10596	A	347	2	343	SSVRAVEFPEDASGGSSPSGTSKSDANR ASSGGGGGGLMEEMNKLLAKRKAAS QSDKPAEKKEDESQMEDPSTSPSPGTRA ATSHLTPQRLAGSPGSGATRWRSLCPRF CPG
2546	10597	A	3470	134	929	RTAARGCNGIPGAAWEAALPRRRPRR HPSVNPRSRAAGSPRTRGRRTERPGR LGDGRGRALPGGRLGGRGRGRAPERV GGRGRGRGTAAPRAAPAARGSRPGPAG TMAAGSITTLPALPEDGGSGAFPPGHFK DPKRLYCKNGGFLRIHPDGRVDGVREK SDPHIKLQLQAEERGVSIGVVC/SNRY LAMKVEDGRLLASKCVTDECFFERLESN NYNTYRSRKYTSWYVALKRTGQYKLS KTGPGQKAILFLPMSG
2547	10598	A	3471	1	2604	
2548	10599	A	3472	478	697	YLIYQSRFFLFSSIRYQMPMPMG/YCNP YAYGQYNMPYPVYHQSPGQAPYPGTQ QPSYFPFQPPQSYYPQQ
2549	10600	A	3473	21	194	
2550	10601	A	3474	2	767	APLSPGAQLGRGAPTSAPPPAAEAHPA ARRGLRSPQLPSGAMSQNGAPGMQES LQGSWVELHFSNNGGSGVPASVSIYNG DMEKILLDAQHESGRSSSKSSHCDSPPS SQTPQDTNRAFETDTHSIGREKQLTVLR EDDIERRKEVESILRKNSDWIWDWSSA GKIFPPKEFLFKTPGSRTATLSMRNTSVL KKGGFSAEFLKVFLPFAALSIAWPIGL GIYIGKASDQPSTSTFGWKEPGSLDLVR

2551	10602	A	3475	1	4220	MLNIVQDSALLEAIGCQMEMGGGENNL KSHSRTNSGISSASGGSTEPTTPDSERPA QALLRDYALNTDSAAGLLIRSIHLVTQRL NSQWRQDMSISLALELLSGLAKVKVM VDSGDRKRAISSVCTYIVYQCSRPAPLHS RDLHSMIVAAFQCLCVWLTEHPDMLDE KDCLKEVLEIVELGISGSKSKNNEQEVK YKGDKEPNPASMVRKDAAEATLTCLVN ETTLIKYSRLPTINKHSFRYFVLDNSVILA ML
2552	10603	A	3476	3	1676	HASDSFRYFVLDNSVILAMLEQPLGNEQ NDFFPSVTVLVRGMSGRLAWAQQCLL PRGAKANQKLFVPEPRVPKNDVGFKYS VKHRPFPEEVDKIPFVKADLSIPDLHEIVT EELEERHRKLRISGMAQQIAYEIHLEQQS EEELQKRSFPDPVTDCPPPAQEFQTAR LFLSHFGFLSLEALKEPANSRLPPHIALD STIPGFFDDIGYLDLLPCRPFDTVFIFYMK PGQKTNQEILKNVESSRTVQPHFLEFLS LGWSVDVGRHPGWTGHVSTWSINCCD DGEQSQQEEVISSEDIGASIFNGQKKVLY YADALTEIAFVVPSPVESLTDLESNISD QSDSDNMDLMPGILKQPSLTLELFPNHT DNLNSSQRLSPSSRMKLPQGRPVVPLGP ETRIVSVVWVERYDDIENFPLSELMTEIS TGVETTANSSTSLRSTTLEKEVLVIFIHPL NTGLFRIKIQGATGKFNMVIPLDGMIVS RRALGFLVRQTVINICRRKRLESDSYSP HVRKQKITDIVNKYRNKQLEPEFYTSL FOEVGLKNCSS
2553	10604	A	3477	288	589	WCSRRRGWYLLGFHNYWRSSTFLVRC TPSCPGGCCPRYGIYPVRSCPLPGGVSR YGSIHSG/RWCSWSPSWPWLTSVTPRL YVALM*AVVCPVVGKQP
2554	10605	A	3478	1250	1909	GAGPDMVWDTELELALKISKGLQRPKA HREEREDIGKHESRCVIYFGTAKKWILK DKNGRSRVDVISHRLKVSSGLCKTHEIG FDPLALKCPLRSRTAPWWPLDRVSFDLH HLVIGNFFVGNRKIFLDYLVYGFHNNR WKLQVQSWSDGCVHRTFGLVKSFSKAS FCIFITKQRKSSDLALKQICANTARVIL KLKHFHFVSYMCTFLFTCENGHL
2555	10606	A	3479	3	246	AAAMSALLILGLLTAVPPASCQQ/GEP AHMILTVGNKADGVLVGTDRYSSMAA SFRSSEHENAYENVPEEKGVRSTPM

2556	10607	A	348	2	2355	WCDLGSLOPPPRFKQFSCSLPRHS*TS Q*PQPPKTQLNFTVAIDFTASNGETRMSE KVGGNPLQPTSLHYMSPYQLSAYAMAL KAVGEIIQDYDSDKLFAPYGFAGKLPPE GRISHQFPLNNDEDPNCAGIEGVLESYF QSLRTVQLYGPTYFAPVINQVASNSWSS VTLGTDSEPAVEVPQYVGIRLLVEGFTIK KPMAMCHRRMGVRPAVPLLTQRSGSEG KDSGTPTHSLHTKAQLPSPHVLRHQGV LRRQHSLKLVGTALSTTGKALRTLPTAK VFISLPPNLDKFAVPSILKPRKSIREDRNG RSQKTVHTEGDMNMNIKKIVKQATVLT FTTALLAGGATQAFKENNQKAYKETY GVSHITRHDMLQIPKQQQNEKYQVPQFD QSTIKNIESAKGLDVWDSWPLQNADGTV AEYNGYHVVFALAGSPKDADDTSIYMF YQKVGDNIDSWKNAAGRVFKDSKDFDA NDPILKDQTQEWSGSATFTSDGKIRLFYT DYSGKHYGKQSLTTAQVNVSKSDDTLKI NGVEDHKTIFDGDGKTYQNVQQFIDEGN YTSNGNHTLRDPHYVEDKGHKYLVFEA NTGTENGYQGEESLFNKAYYGGGTNFF RKESQKLQQSACKRDAELANGALGHIEL NNDYTLKKVMKPLITSNTVTDEIERANV FKMNGKWYLFDTDSRGSKMTIDGINSNDI YMLGYVSNLTGPYKPLNKTGLVLQMG LDPNDVTFTYSHFAVPQAKGNNVVITSY MTNRGFFEDKKATFAPSFLMNIKGKNTS VVKNSILEPGQLAVN
2557	10608	A	3480	162	530	ELLQPMASALLILGLLTAVPPASCQOGL GNLQPWMQGLIAAAFLVLVAIAFAVN HFWGAKEEP/ESPAHMILTVGNKADGV LVGTDGARYSSMAASFRSSEHENAYEN VPEEEGKVRSTPM
2558	10609	A	3481	4	409	NAATSLTANPDATTVNIEDPGETPKHQ GSPRGSGREEDDELLGNDDSDKT/EGTV SGNDSSEVNDTWPLPWWGKQANRPLLS LLAGQKKSSPFWTFEYYQTFDVTYQV FDRIKGSLLPIPGKNFVRLYIRSIV
2559	10610	A	3482	160	518	
2560	10611	A	3483	12	197	
2561	10612	A	3484	2	321	ARGVYGYSLFYIPTAILWIIPHKAVRWI LVQVIALGISGSLAMTFWPAVREDNRRV ALATIVTIVLLHMLLSVGCLACFFDAPE MDHLPITTTGTPNQTVAAAKSS
2562	10613	A	3485	187	1280	PLARLNCCLSSSPSPLSNLSFLIGTSL GCTCSLKSHKPCQIFLIIGRRLTGRMA AVDDLQFEFEGNAATSLTANPDATTVNI EDPGETPKHQPGSPRGSGREEDDELLGN DDSDKTELLAGQKKSSPFWTFEYYQTF DVTYQVFDRIKGSLLPIPGKNFVRLYIR SNPDLYGPFWICATLVFAIAISGNLSNFI HLGEKTYHYVPEFRKVSIAATIIYAYAW LVPLALWGFLMWRNSKVMNIVSYSFLEI VCVYGYSLFYIPTAILWIIPKAVRWILV MIALGISGSLAMTFWPAVREDNRRVAL ALVVTIVLLHMLLSVGCLAYFFDAPEMD HLPTTTATPNQTVAAAKSS
2563	10614	A	3486	112	563	LDSSHCCSCSTALFRTQTAAAVPRMVI RVYIASSSGSTAI/RGKRQQDVLGFLEAN KIGFGRKDIAANGENRKWMRENVENS RPGTGIVPLPPQIFNESQYRGDYDAFFG RPEENNAVYCLRLGTAPPGVSKGRQE GAKPKAGQALTL
2564	10615	A	3487	105	335	GRLFPKVLSYHSVGYLPLILFCHFLLANC ILCCLMHFL*FFQSYRF*G*KFGFTQHHC HYIFHKQWPLLWKNFPEH

2565	10616	A	3488	993	1338	QNCLKPHFFFFFETRVSLLPKREAMGTI STHCNLCPLPGFQGNPASASQGR/AGLH GMGPPCR/RGTFVFLIGDRGFLHVGSSWS WNSQPQVIRPVRPSPKCVGLQGMEATV PSP
2566	10617	A	3489	2	454	PLPPALPGCHALAPSSYIPVAIRALEPPS PYHGQLKMQSIPGAPPQPRSFLLSSPLDVD SPQAPRHCTGLPAPSLSSPPWSCPTLFSW FFEASGVCHHWTSVIAASNSSPIPELPH HPLRISAWLFPPWRDHSQDPLCRGATSP VLNS
2567	10618	A	349	1129	1821	AWGSGKQRRQEAQCEVAEFTPAWRR APDTPAPLVLEPARA*HTSPKKHPPMWC RFFFFRQSFALVPQIGVQWRNLGSLQPLP PRFKAFSYPQPPSSWHYRHPVPIFVFA NFCIFNKRWGFTMLAKLVLNS*PHEIHP PGPSQSAGIMGVSHCTWLVSFKVVLV DYFFEKFPN*GNRFEFYFYLFETGSHSVN QAGVQR/PYHASLQPPQAQVSLPSSW DYRHVPF
2568	10619	A	3490	1109	1448	PRLISKCFLLLLFFRQSHFVAQAGVQWC DLRSVYHLPGLKRFSCLSLSSWDYRH LPPCPANFCNFSRDRVSPCCPGWFRTPD PGDPPASAPKWWEYTL*PPGDPHKAF
2569	10620	A	3491	14	250	VLSVGLPTGDTGIGLSRKTSPAPVALIHS HSLKQAFP*LTLSRTGNIHAIYRGVLK YCNFICLGFMRLRYQLVSPSF
2570	10621	A	3492	1	1065	
2571	10622	A	3493	90	1937	AGGNQRTQSPRKNFMAFQASHRPAWVK SRKKNWQYEGPTQKLFLKRNNVSAPDG PSDPSISASSEQGAQQPPGLQVERIVDK RKNKKGKTEYLVRWKGYDSEDDTWEP EQHLVNCEEYIHDNRRHTEKQKESTLT RTNRTSPNNARKQISRSTNSNFSKTSKA LVIGKDHEKNSQLFAASQKFRKNTAPS LSSRKNMDLAKSGIKLVPKSPVKSRTAV DGFQSESPEKLDPVEQQQEDTVAPEVAA EKPVGALLGPGAERARMGSRPRIHPLVP QVPGPVTAAMATGLAVNGKGTSPFMDA LTANGTTNIQTSVTGVTASKRKFIDRR DQPFDKRLRFSVRQTESAYRYRDIVVRK QDGFTHILLSTKSSENNSLNPIEVLREVQS ALSTAAANDSKVVLPRAVGSVFCCGLN FNYFKPRLPNARKRESIKMAEIRNFVN TFIQFKPIIVAVNGPAIGLGASILPLCDV VWANEKAWFQTPYTTFGQSQEGCSPV MFPKIMGGSICILDAVLGDRNLTAQEAC GKGLVSRVFWPGTSPRKVMVRIKELASC NPVVLEESKALVRCNMKMELEQANERE CEVLKKIWGSAQGDGTRMLKVLCRGKI E
2572	10623	A	3494	2	572	WCLQHD/LGHASIFKKSWWNHVAQKFV MGQ/LKGFSAHWWNFRHFQHHAKPNIF HKDPDVTVPVFLGESSVEYGKKRR YLPYNQQHLYFFLIGPPLLTLVNFEVENL AYMLVCMQWAVSGVAQDPGHTAAVA GGGASGDSTCP*RQTGCTDLLWAASFY ARFFLSYLPFYGVPGVLLFFVAVRYGRE WR
2573	10624	A	3495	25	430	YKNNFPPILALGKCAMLTFPLPLSHQA QSQGHRAEYTCGRSPFPVGSPLPWGQ AAMRAGGWVGRATAECFSGMESRPG*R VSGRGAGGQPRSPGMSLGGPVPPAPSS PLPPAGRCNPRTERTNWLPTRSWA

2574	10625	A	3496	821	1412	GSARASPGGPKPLVRVDHTDEPHPGQD RPREAPGLGQLSAGSHLQRGALTFVHQL VQRAPQLPDRAPPLQDAETQLQPGCPA CQVAVCQVARPQLRSEALPHRAGGHR QVPEESLVTSCWTPTSISEGNTQAGREGL RAPATKPSPRRDRIPPTPLTSLGVPCLPS WYCCLPLGLPTCVFSSPMALALGLMGQ G
2575	10626	A	3497	32	616	VLQCSHGCFSPSSGGALTDEAASSCCSD ADPSTKDFLLQQTMLRVKDPKKSDFY TRVLGMTLIQKCDFPIMKFSLYFLAYE DKNDIPK\EKDEKIAWAVSRKATLELTQ QFGALKDDATQSYHNGNSDPRGFHIGI AVPDVYSACKRFEELGVKFVKPPDDG KMKGLAFIQDPDGYWIEILNPNKMATL M
2576	10627	A	3498	77	403	
2577	10628	A	3499	18	753	TQPQLTSTCYRAFASWRTRSLEPATILP TTCCPAPAAMCRTLAAFPITCLERAKEF KTLLGIFPHKS\ELGFDTGSTGKFEWGSK HSKGD\KTSQKDVLGWRESFDLLSSK NGVAAFHAF\KTEFSEENLEFWLACEE FKKIRSATKLASRAHQIFEEFICSEAPKE VNIDHETRELTRMNLQTATATCFDAAQ KTRTLMEKD/SPYPRFLKSPAYRDLAAQ ASAASATLSSCSLDEPSHT
2578	10629	A	35	45	819	RSLALSPRLECNAGISAHCKLRLPGSRHS PASASRAAGTTGAHHRARLIFFVLVET GFHRVSQDGL/EPDL/DDPPASASQSAGI TGVTAAPSRACSF\KLARGRACPGWDWA EELTGTSHTRRVHPGQALWGWDRRC CGSRSWQT*LQRCPAVLRGWLAC\TAQ EEQIGPYVSVPVPGAACCFIDVLR*KI SDKDVFKAGRGAQPKTF\FLRKSL/NPV TQARVQWCDLSSLQLLPPRFK*FSCFSLP SRTIT
2579	10630	A	350	325	608	LMPCNPRHFERLRQADHLRSGVPRPALV QHGETLSVLKIQKLGHHGSTCL*SQLLR LRQKNLLSLGGRGCSKLRSHHCTPAWV TEPD\SVSKKK
2580	10631	A	3500	28	342	PGSTHASADAWVHPKNI/SSVNALSPGPH CAQTEV/IVSPAPRCLCHRRGPRPSCPN PVPSLT\CLTRFPLCRATLKNGRKACLN PASPIVKKIIKMLNSDKSN
2581	10632	A	3501	1	274	MARATLSAAPSNPRLLRVALLLLLVAA SRRAAGASVVTELRCQCLQTLQGIHLKN IQSVNATLKNGKKACLN\ASPMPVQKII KILNNP
2582	10633	A	3502	1	893	MSSREVTTPGKDVARSLRGSKGSDPRRT ALGSR\ASSQAVISVSLRAAGSR\SRSDS GQKENIPQLAGVTQDSQTRTSLVSAPTPL HPRGGAIAFLPNSGSIWSSGNFPGPLRA FQPQPCIKGVRRSRRATEPGPQAAPCQLS SSHRSNRLLSPMARATLSAAPSNPRLLR VALLLLLVAA\SRRAAGAPLATELRCQC LQTLQGIHLKNIQSVKVKSPGPHCAQTE VM*VSP\IAAAATAGVPDSPAAPNPVLS TSCLTRFPLCRATLKNGQKACLN\ASP MVKKIIKMLKK
2583	10634	A	3503	1	407	ATEPGPQAPPRQLFRSSHRSQTRLLSPMA RAALSAAPSNPRLLRVALLLLLVAAGR RAAGASVATELRCQCLQTLQGIHPKNIQ SVNVKSPGPHCAQNEVHKHTQEMGGKA CLNPASPIIKKIIKMLNSDKSN

2584	10635	A	3507	47	891	KQPFEVWPAGGERLSGARPKKEARLLR WCPMSFKRNRSDRFYSTRCCGVCCHVR TGTHILGTWYMVVNLLMAILLTVVTHP NSMPVAVNIQYE\VIIGNYYSISERMADNA C/VFFFAVSVLKVYNPVPMLVYGSNFLY PSGVGWIPFF\CYRLDFVLS\CLVAISSLT YLPRIKEYLADQLPDFDPKDDLRLALDSS CLLFIVLVFFALFIIFKAYLINCWVWNCYK YINNRRNVCPEIAVYPAFEAPPQ\YVLPTY EMGREKWPEKEPHPLLTWPEGNSGLW TINP
2585	10636	A	3508	246	559	MPVAVMAES/AFSFKKLLDQCENQELEA PGGIATPPVYGQLLALYLLHN/GQRIWQR DFPGIYTTINAHQWSETVQPIMEALRDAT RRRAFALVSQAYTSIIADFFA
2586	10637	A	3509	2	250	
2587	10638	A	351	3	218	
2588	10639	A	3510	2	119	
2589	10640	A	3511	197	921	GTVWGLAVRTVQRRGPAAKMPVAVMA ESAF\SFKKLLDQCENQELEAPGGIATP KVYQQLLALYLLHNDMNNARYLWKRI PPAIKSANSELGG\WSVGQRIWQ\RDFFG IYTTINAHQWSETVQPIYKHFDRDATR/ RDRAFAPGLLQAVYFQSIRPMIFAFAVGV LPV\EEAVKGIL\EQGW\QADSTTRNGSC PGKPVCRGPWDVFPFNKFISLYSEP\APV PPIPNEQQLARLTDYVAFLEN
2590	10641	A	3512	3	354	
2591	10642	A	3513	1	179	
2592	10643	A	3514	63	386	LRTLISCHLVVLMLLFLHTGGDDGLLRG WDTRVPGKFLFTSKR*PPKGQHSVPTPA PAFPGSPALPFGWVCVLDTGSEAASAC RHTMGVCSIQSSPHREHILATGR
2593	10644	A	3515	1	147	
2594	10645	A	3516	450	1154	KSHVLEPLSSLALEEQLALS LDWSTGK TGRAGDQPLKIISSDSTGQLHLLMVNETR PRLQKVASWQAHAQFEAW/TCCFQLPWH PEIVYSGGDDGLLRGWDTRVPGTFLFTS/ IKTHHGCVASIQSKPSSGAHPWPRESYDE THPTV\DTRNMKQPLADTPVQGGVWRIK WHPFHHLHLLAACMHSGFKILNCQKAM EERQEATVLTSTLTPDSL VYGADWSWL LFRSLQRAPLVVLS
2595	10646	A	3517	73	168	
2596	10647	A	3518	322	671	RLWASPAAPGKKKEMGNSMKSTPAPAE RPLPNPEGLDSDFLAVLSDYPSPDINPPIF RRGEKLRVISDERGWKAVISLSTGRESY IPAICVARSYHGWLLRGP GKNNMAEELL QLPD
2597	10648	A	3519	624	1580	KAATSENKIIICEWRTSQAALMLHRLW ASPAAPGKKKEMGNSMKSTPAPAERPLP NPEGLDSDFLAVLSDYPSPDISPPIFRGE KLRVISDEGGWWKAISLSTGRESYIPGV CVARV\YHGL\WLFEGLRDKAEELLQL PDTKVGSFMIRESETKKGfYSLSVRHRQ VKTYRIFRLPNNWYIYISRLTFQCL\EDL V\NHYSEVADGLCCVLTTPCL\TQSTAAAP AVRACSSPVTLRQKTV\WRRVSRLOED PEGTENPLGVVESLFSYGLRESIASYLSL TSEDISSFDRKKKSISLMYGGSKRKSSFFS SPPYFED

2598	10649	A	352	319	1979	VPGVPAARPERECRAHPASFPPPPGGLDS GFVPSVQDFDKLLEADAYLQILIEQLKL F**QASKRKEDEQRKKIETLKETTNSMV ESIKHCIVLLQIAKDQSNAEKHADGMIST IKSCRCNIPA*SLGTCDQAQCLPRLPYLQ NPLSCVSQSSVHLS*QVGPVLSYLTSSD SNTQIVPGSGNFTNLAASLTPSQAMSTLS PNTVPEFSYSRQ*/EDEFYDAD/ENSIKVG SSPKRLIDSSGSASVLTSSSGNSLKRDPDT TESLNSSLNNGTSDADLFDSDHDDRDDDA EAGSVEEHKSVIMHLLSQVRLGMDLTK VVLPTFILERRSLEMYADFFAHPDLFVS ISDQKDPKDRMVQVVKWYLSAFHAGRK GSVAKKPYNPILGEIFQCHWTLPNDEE NKLVSSEGPVPGVSKNSVTFAEQVSH HPPIFSLFMLECFNKKIQFNAHIWTKSKF LGMSIGVHNIGQGCVSCLDYDEHYILTFP NGYGRSILTPVWVELGGEENINCSKTGY SANIIFHTKPFYGGKKHRITAEIFSPNDKK SFCISIEGEWNG
2599	10650	A	3520	24	688	VDHPPYKRTEKVRAQRSPKSQDIYLGALL VKLYRFSGPEEPNSNIQTRVVLKRLFMS RTNRPPLSLSRMIREDEAFLAGKKKNP AVVVGPPQLIMCGVQKGTPLKVCALG GTQAGPHKRNLARGQRSITFDQLALD/S PLRGCGTVLLISGPSKGREYRHF GKAP GNPHSHTKPYVRSKGRKFERRARGARRA SRGYKKLTLDPTLLYKKIFADSEKKKK
2600	10651	A	3522	195	391	PGVAGARHPLLGAAPKGRLEVLAVGFH GSAANQVWVSKSHPPQFIPTDQEIIGDRA LKGTCLPLS
2601	10652	A	3523	112	492	AHSRTPARPENRAAASAPRKPRRAMSSP PEGKLETKAGHPPAVKAGGMRIQKHP HTGDTKEEKDKDDQEWESPPPKPTVFI SGVIARGDKDFPPAAAQVAHQKPHASM DKHPSRPTQHIQPRK
2602	10653	A	3524	3	982	GTRVGVAWRSVRLLLGPGAGLRGGVVL KVSPSPCRGRRVPVRAEGARGRGRPN KVPGASSGAAVGAARLTAPLLAKAMAS KLLRAVILGPPGLGKGAPVCQRIANFG LQVHLSGHLRENIKAISTEVGEMANQV YREKVFLVPDHVITRLMMSELENRRGQ HWLLDGFPRTLGQAEALDKICEVDLVIS LNIPFETLKDGLNRRWIHPPSGRVYNLA DFNPPHVHGIDDVTGEPLVQQEDDKPE AVAAIRLRQYKDVAKPVIELYKSIRGVL HQFSGTETNKMWPVYVYTLFSNKITPIQ SKESILTALQWEEPWNDVGHFSFQ
2603	10654	A	3525	19	445	
2604	10655	A	3526	1	622	QAAWILKARALTEMVYIDEIDVDQEGIA EMMLDENAIQVPRPGTSLKLPGTNQTG GPSQAVRPTSHSEKPITGFLRPSTQSGRP GTMEQAIRTPRTAYTARPITSSSGRFVRL GTASMLTSPDGPFIN*SRLNLTKYSQKPK MAKALPEYIFHHENDVKTALELAALSTE HSQYKDWVWKVQIEKRYRLGMYREA EKQLISAMKQ

2605	10656	A	3527	1	1509	MKAEICKSRTVKDWHNHQKLGEKNKTD SPPQPSEGNTANTLILDFWPLEMIACCW ETFPQRLTAELFMNPTHWRHGYKNQSV GALRAPLGQGPSRRGLPGRVGRRLFTP RPPLSWSAGPSLAAPAAMSSEMEPLLLA WSYFRRRKQFQCADLCTQMLEKSPYDQ EPDPELPVHQAAWILKARALTEMVYIDE IDVDQEGIAEMMLDENAI/PSSTPITQAG RPITGFLRPSTQSGRPGTMEQAIRTPRTA YTARPITSSSGRFVRLGTLGMYREAEKQ FKSALKQQEMVDTFLYLAKVYVSLDQP VTALNLFKQGLDKFPGEVTLCCGIARIYE EMNNMSSAAEYYKEVLKQDNTHVEAIA CIGSNHFYSQPEIALRFYRRLQMGIYN GQLFNNLGLCCFYAQQYDMTLTSFERA LSLAENEEEAADVWYNLGHVAVGIGDT NLAHQCFRLALVNNNNHAEAYNNLAVL GDAEG/RHVEQARALLQTASSISPHMYE PHF
2606	10657	A	353	27	749	STCCFQELVTL*GCKLCTFHPGRKWETR LAEPLPQRDPSYRVVMLGELRGIVFTGI VSPRTENDQEISEDTRSHGVLLGRFQKD ISQGLKFKEAYEREVSLKRPLGNSPGERL NRKMPDFGQVTVERS*PPGEREA/RKYN DFGNSFTVNSNLISHQRLPVG/DTRPHKC DECSKSFNRTSDLIQHQRHTGEKPYECN EICGKAFSQSSHLIQHQRHTGEKPYECS DWGKTFSCSSDLILH
2607	10658	A	3531	1	174	
2608	10659	A	3532	1	189	MDAVAVYHGKISRETGEKLLLATGLDG SYLLRDSSEVPGVYCLCVLFQKPDQGIV IPLQYPV
2609	10660	A	3533	3	210	CPRVHQAMDAAVAVYHGKISRETGEKLL LATGLDGSYLLRDSSEVPGVYCLCVL*V *YVCCEYDTPDCLWYLVMAA
2610	10661	A	3534	1	386	GISLAQFSSSACPRVHQAMDAAVAVYHG KISRETGEKLLLATGLDGSYLLRDSSEVP GVYCLCVLYHGYIYTYRVSQTETGSWS A/EAFQKPDQGIVIPLOYPVEKKSSARST QGTGTGIREDPDVCLKAP
2611	10662	A	3535	224	751	LVPGCCSSSGISLAQFSSSACPRVHQAMD AVAVYHGKISRETGEKLLLATGLDGSY LLRDSSEVPGVYCLCVLYHGYIYTYRVS QTETGSWSAETAPGIVHKRYFRKMKKS HFQHFQKQDQIGIVIPLOYPVEKKSSARS TQGTGTGIREDPDVCLNAPLIKISPLRPLFS ITFNIC
2612	10663	A	3536	3	199	SIRAEMSRSVLAVLALLSLGLEAIQRT PKIQVYITSSSREWKVKFPELLCVWVSST PTLKLTY
2613	10664	A	3537	134	404	
2614	10665	A	3538	415	533	
2615	10666	A	3539	1	3349	MDQPEAPCSSTGPRLAVARELLAALAE LSQEQLKRFRHLRDLVGPDRSIPWGRRL ERADAVDLAEQLAQFYGPEPALEVARK TLKRADARDVAAQLQERRLQRLGLGSG TLLSVSEYKKKYREHVLQHLARVKERN ARSVKITKRFTKLLIAPESAAPPEALGPA EEPEPGRARRSDTHTFNRLFRDEEGRRP LTVVLQGPAGIGKTMAAKKILYDWAAG KLYQQGVDFAFFMPCGELLERPGTRSLA DLILD
2616	10667	A	354	69	378	KGGSLLGAPRVEGPNFGLKDSSSPKKRE FPALPPPGGGN/KRAGPPCPGKFGFLKKK GVPPGGKRGLENRPQGDSSS*PPKGGGI TGGAPRPGKKRSFSLQKIL
2617	10668	A	3540	3	261	
2618	10669	A	3541	3	429	

2619	10670	A	3542	1	859	ALGKQKCEEWRSKY/EALK/ED/WRNLG AQHRELESQHLVLSKLGADSRDLQM NQALRSLQNEHQQLQAKIECLQADRDL SLYTQDLQDQLKRSEAEKLTIVTRVQQL QGLLQNSLQLEQEKLLTK/KRSANLL PQILRYCSFSYLPRGSGMDYMTSWSPSQ FWEFC*VRDVWELFKD*SLALRTLQLVS LLS*DQALPVWSPKSPNEVEPEGTGKE KDWDLRDQLQKKTLLQQAKEKECRELH SELDNLSDEYLSCLRKLQHCREELNQSQ QLPPRRQCGRWLP
2620	10671	A	3543	392	2016	AKRNRCLVIMISPDPRSPGLARGAESY EAKCERRQEIRESRRCRPNVTTCRQVGK TLRIQQREQLQRARLQOFFRRRNLELEE KGKAQHPQAREQGSPRRPGQVTGTSSEV FPAQHPPSGICRDLSDHLSSQAGGLPPQ DTPIKKPPKHHRGTQTKAEGPTIKNDAS QQINYGVAVLDKEIQLSDYLKEALQRE LVLKQKMVILQDLLSTLIQASDSSWKGO LNEDKLKGLRSLNQLYTCTQKYSWP GMKKVLLEMEDQKNSYEQKAKESLQK VLEEKMNAEQQLQSTQSRSLALAEQKCE EWSRQYEALKEDWRTLGTQHRELESQ HVLQSKLGADSRDLQMNQALRFLNE HQQLQAKIECLQGDRDLCSLDTQDLQD QLKRSEAEKLTIVTRVQQLQGLLQNSL QLQEKEKLLTKKDQALPVWSPKSPNEV EPEGTGKEKDWDLRDQLQKKTLLQQA EKECRELHSELDNLSDEYLSCLRKLQHC REELNQSQQLPPRRQCGKGLPVLMMVI APALAVFLANKNNLMI
2621	10672	A	3544	35	219	
2622	10673	A	3545	293	479	
2623	10674	A	3546	1	968	VKLPSCPDPAMGTSLLCWMALELLGAD HADTGVSQNPRIHNTKRGQNVTRCDPI SEHNRLYWYRQTLGQGPEFLTTFQNEA QLEKSRLSDRFSERPFGSFSTLEIQRTE QGDSAMYLCASSLAGLNQPHFGDGTR LSILEDLNKVFPEVAVFEPSEAEISHTQK ATLVCLATGFFPDHVELSWWVNGKEV HSGVSTDPOPLKEQPALNDSRYCLSSRL RVSATFWQNPRIHNTKRGQNVTRCDPI DEWTQDRAKPVTQIVSAEAWGRADCGF TSVSYQQGVLSATILYEILLGKATLYAV LVSAVLMMAMVVRKDF
2624	10675	A	3547	278	1283	GGIGEIKQRPSCLGRCLDPSLSVLMNISL ELGSVFSAVISQPSRDICHRGTSITQGG VDSQVTMMFWYRQQPGQSLTIATANQ GSEATYESGFVIDKFPISRPNTFTSLTVS NMSPEDSSIYLCVVEEQGFVGAETQYF GPGTRLLVLEDLKNVFPPEVA/VLFEPSE AEISHTQKATLVCLAICFYLDHVELSWW VNGKEAHSGVSTDPOPLKEQPALNDSRY CLSSRLRVSATFWQNPRIHNTKRGQNV GLSENDEWTQDRAKPVTQIVSAEAWGR ADCGFTSGKSYQQGVLSATILYEILLGK ATLYAVLVSAVLMMAMVVRKDSRG
2625	10676	A	3548	151	286	
2626	10677	A	3549	28	177	
2627	10678	A	355	213	660	KPVILGYAEPPAPGQFSRGP/WSRAE/WP GTASPLL/SCATSALL*SIPKGPDSHRGH QHGTPTKPSKPEKGTAGQLSRYITPQE KEIAPLNPPALKSPSKENRDPDLTGPGQ TSRALTVPAGCALGPQVEPMKALRRQM GGAVFPLGS
2628	10679	A	3550	422	671	RIYPALRMPSINTASIAQARKLVEQLFMF VANIDRIKVSAAAADLMAYCEAHAKEDP LLTPVPAENPFKEKKFFCAHPLSL

2629	10680	B	3551	62	299	MFSLKKWNAVAMWSWDVECDTCAICR VQVMDEGIGVRNWSEALNLIYASEMGF DLDMGSQTSLSPLAHWLLNNLGMNL X*
2630	10681	A	3552	1	602	ADVEDGEETCALASHGSSGSKSGGDK MFSLKKWNAVAMWSWDVECDTCAICR VQVMDEGIGVRNWSEALNLIYASEMGF DCRSGSTALAVPSVSLASHQPCLDDHR* QPIGSIQSSLF*RNSQVS*GRK*KVASYEL LKEGFCVNACLRCQAENKQEDCVVW GECNHSFHNCCMSLWVKQNNRCLCQ DWVVQRIGK
2631	10682	A	3553	2	428	SGGSTPLGLSAFPKPTSSAVGSVGAAM ADVEDGEETCALASHGSSGSKSGGDK MFSLKKWNAVAMWSWDVECDTCAICR VQVMDACFRCQAENKQEDFFVVLGECN HSFHNCHVPCGSKQNNRCLCQ\QDW VV\QRIGK
2632	10683	A	3555	3	378	
2633	10684	A	3556	2	299	LLNSRPRRRQQAQPSLEMQNDAGEFVD LYVPRKCSASNRIIGAKDHASIQMNVAE VDKVTGRFNGQFKTYAICGAIRRMGES HDSFLRMAKADGIVSK
2634	10685	A	3557	1	392	RRYLCRVTSCLSLRAVWWPARRSPAF EMQNGRRRSSDLYRARGKLSASNRIIG\ AKDHASIQMNVAEVDKVTGRFNGQFK TYAICGAIRRMGESDDSIARLAKADGIV FKELFDWREITDVGFCHK
2635	10686	A	3558	1	415	FRDIVNENGEIEIQDEEDGYDD\EMT GTGMKES*NSPWVMAG/HGGSNPQANR QTSOSSAKMSTPADKVLRFENKINLD KLNVTDSVIYKATEF/DTKGIKYVLDPT TRMILFKMLTRGIITDIDGCISTGREANV
2636	10687	A	3559	139	1914	AVPFHRRAAASGGALQSWTTGGLLSMR VVPQGDDADSSDSENRLKTVKEKDDI LFEDLQDNVNENGEIEDEE/WKEGYD DD\EMTGTGMKELENSPRVMSGIGRKQP TGKSTD\PDSSSAKMSTPADKVLRFEN KINLDKLNVTDSVINKVTEKSQKEADM YRIKDKADRATVEQVLDPRTRMILFKM VTRGIITEINGCISTGKEANGYHASTANG ESRAIKIYKTSILVFKDRDKYVSGEFRFR HGYCRGNPRKMVKTWAEKEMRNLRNLN HSR/GYHCPEPIMLRHGLAMSGIKDD MPATNFGKMFQLESKARELYLQVIQY MRRMYQDARLVHADLSEFNIMYHGGG VYIID\VSQSVEHDHPHALEFLRKDCAN VNDFFMRHSVAVMTVRELFEFVTDPIPL HHENLDAYLSKAMEIASQRTKERTV/SS QDHVDEEVFKRSYIPRNLDVKNYERD MDIIMKLKEEDMAMNAQQDNILYQTVT GLKKDLSGVQKVPALLENQVEERTCSDS EDIGSSECSDTDSEEQGDHARPKKHTTD PDIDKKERKKIEVKEAQREKRKNKIPKH VKKRKEKTAKTKKGK
2637	10688	A	356	629	1007	KGTYIKQERLENLRTNHLDKYYNPPMK QNYQKLCQKGMSRTHREESR*MRGNR CRLRITRNA*FEGENLQNKVAQGENLEKK PEPATYI*EA*ESKRDKGV*KSVCVSSFPT MQ*KSD*SEYSYG
2638	10689	A	3560	129	567	SYKSRLARKSVTGGKAPRK\QLAYKKPA SQECGPLLGLKKPHRYRPGTVALREIR RYQKSTELMIRK\LRFORLVREIAQDF KTDLRFQERSNQVALQEA\RRAYLVWP FLKDTNLVCLSMKRVPIPKRHSSAR RHHVENVL
2639	10690	A	3564	194	338	

2640	10691	A	3565	197	522	GSAAMKVKIKCWNGVAHWLVVANDE NCGICRMAFNGCCPGCECSPMLSERPR LQGAPATDCPAGCGGPVLPCTCFQHALHP QVGLHAQQVQALAPMLPPRIGKFKE
2641	10692	A	3566	1	6521	MLRKRKWLGVVAHACNPSTLGGQGH DKQPQVRRLSAPGSRIAGQWVLDLKS PHLLKGENDKNSLSQKAFLYVAHVLD SERGVLVTMTTETGPDSEVKKAQEEAPQ QPEAAAAVTPVTPAGHGHPEANSNEK HPSQQDTRPAEQSLDMEEKDYSEADGLS ERTTPSKAQKSPQKIAKKYKSAICRVTL DASEYECEVEKHGRGQVLFDLVCEHLN LLEKDYFGLTFCDADSQKNWLDPSKEIK KQIRSE
2642	10693	A	3567	1	1232	GCTGTWGEALFIKEKGFFWSPATGPMA AVQMDPELAKRLFFEGATVVILNMPKG TEFGIDYNSWEVGPKLRGVKMPPGIHFL HYSSVDKANPKEVGPRMGFFLSLHQRG LTVLRWSTLREEVDLSPAPESEVEAMRA NLQELDQFLGPYPYATLKKWISLTNFISE ATVKKLQPENRQICAFSDVLPVLSMKHT KDRVGQNLPRCGIECKSYQEGLARLP KPRAGTEIRFSELPQMFEGATPAEITK HSMDSLAYALETVHNKQFPSSPDVVGEL QFAFVCFLGNVYEAFAHWRLLNLLC RSEAAMKK/HATRLWINLISILHHQLGEIP ADFFVDIVSQHNFLTSTLQVFFSSACIA VDATLRKKAQKFAHLTKKFRWDFAE PEDCAPVVEELPEGIEMG
2643	10694	A	3568	2	166	
2644	10695	A	3569	56	1072	ARGGGAMEGLEENGGVVQVGELLPCKI CGRTFAPVVALKKHGPICQKTATKKRKT DSSRQRAEGTDIPTVKPLKPRPEPPKPS NWRKHEEFATIRAAGLDQALKEGIG KLAPPPPPPSYDPGFIIQW/CPYQCRKIP MENAADRHINFCKEQAARISNKRRFSTD TKGKPTSRTQVYKPPALKKSNSPGTASS GSSRVPQPSGAGKTVVGVPSQGVSSS SSSLG/NTKLQTLSPSHKGIAAPHAGANV KPRNSTPPSFARNPAAGVLTNKRKTYT ESYIARPDGDCASSLNGGNIGIEGHSPG NFPKFCHECGTKYPVEWAKFCCECGIR RMIL
2645	10696	C	357	1	555	MLYVLIESERARIKKLQEEKTRNLESSRK LEPTIVSEHKGLRTEQTDIDVLGQHLTK EHVSSHQSPIRDSQWFTLSPQEKYACSY ERKDPLIKRAFIIFYHRNAVVS HGGNGPA VVLPISRFVLTPTTFESTLPFLSSRLAWGT SSKDPRIAAGQQSPLEKKILVSKLSSHHT VWNYTEKES*
2646	10697	A	3571	32	469	
2647	10698	A	3572	659	1149	EVTACRQPSVAFSTSLALALTALLEEPF SLLHCESPLLGWASSCGGCAGSPSSAG PAGIVLK/SLAGPQLPPCRVGLGTCSLPY LSLPPAVGSFMARASLMSAAPCSMARVP STTQGLLSRTPQCGQMAQDWQAAPPAS PVQDPLEEASWAPESSGDLENFYV
2648	10699	C	3573	361	501	MLFLRYAPLVGGSFCIWSHPLQFFLTSIK VNFVETLFCFQSFKDIF*
2649	10700	A	3574	124	579	EPLPGLAKAGAGSLSCSVRPCAAGASPT SATPCSIAPSPIDHPRAEECGRMVQDWQ AAPPAPRCGIHWVKPAGLLSLLMSMVR INMIVKLLVFVILLVT*FTVKVCLYIFQGL CCGLLFCKILHGSPSHRHPKDLWHHCDL DVRHEVKGDH

2650	10701	A	3575	2765	3138	YSLKSGSVMPPALFFWLRIALAMQALF WFHMFNFKVVFSNSLKKVIGSFMGMALN L*ITLGSMAIFTILILPTHEHGMFFHLFVSS FISLSSGL*FSLKRSFTSLVSWIPRYFILFE AIVNGSSL
2651	10702	A	3576	265	663	GRASGVVRSRPRWVCDLAGFRGEAADLH GVCYSRLRSPAGFTQWIIHQGSRWSCLP VPRRAPALLALGWSMGWAPPQPLAWV LSPSLPGAGSADWLLQVRGPPSPRPPGTP AGPPAPCAALVPARVSPSTLPS
2652	10703	A	3577	82	361	LRSPAGFTQWIRTGAAGGAACQFRAVRP ALLSPWVVDGTGRRGAGGGAYRGGSG RTGAHGTGGGSGMAGCRSRAVPRRCAA KTRPCEVQKRQHNVNLYLFPVETKAQT VKWFLA*ASPCSVGSCAARASPIAAP CSTAPSPIDHPRAEECWAHGTLAGSSTC SPGADPLGEASWAPE
2653	10704	A	3578	806	934	KILSSKFPSFLPSYVCTSSFP*THPSIIST SSSSHVPTN
2654	10705	A	3579	1034	1393	AVTLTGKVCSTPEASETTNPPGGTNNS RRASLRAATLTVKRSFTPRGSAASFFKS VRPRTHQFRTQYSPRMSKIRDCSRSCFI SFLASWRIICLL*VLISLCAW*RYRLF LPSS
2655	10706	A	358	4627	5052	LSTKAPRKDTLNFNKCWENWISICRRLQ LGSYLLPY*KINQKWIKGLNDRSETMKL LKENIGEMLKNI GLGKDFMVKTSKA*AT KQKIGRWYIKLKICTAKKT/IRVKRPTV DGNIFKLSNRGLISRVYKEHNSTVKKK KK
2656	10707	A	3580	529	750	REFRVGVASADPAFGAAGRCPQGG*G A*HTGQWLRRVYWVPOQCQPTGVALDF SPGLSCLPAGQGSGPAARHA
2657	10708	A	3581	2	343	HAVFFISIRSFMFFFKLVILVSNSSKLFSTF LVSLHWVRTCSFSSEEFVITHFLKPTSVN SSNSFSVQFCSLAGEEL*SFGGEEAFWFL EFSALHWFFLIFMDLSTFGLCCC
2658	10709	A	3582	289	422	
2659	10710	A	3583	189	309	
2660	10711	A	3584	587	801	
2661	10712	A	3585	76	1740	SLLTAASSFQPLKQSSHLSHPSGWDYR LRMTQNKLLKCSKANVYTEVPDGGWG WAVAVSFFFVEVFTYGIKTFGVFFNDL MDSFNESNSRISWISICVFVLTFSAPLAT VLSNRULGHRLVVM LGGLVSTGMVAA SFSQEVSHMYVAIGIISGLGYCFSFLPTVT ILSQYFGTRRSIVTAVA\STGECFAVFAF APAIMALKERIGWRYSLLFVGLLQNLNVI FGALLRPIFIRGPASPKIVIENRKEAQY MLENEKTRTSIDSIDSGVELTTSKPNVPT HTNLELEPKAD\MOQVLVKTSRPPSEKK APLLDFSILKEKSFCYALFGLFATLGFFA PSLYIPLGISLGIDQDRAAFLSTMAIAE VFGRIGAGFVLNREPIRKIYIELICVILLTV SLFAFTFATEFWGLMSCSIFFGFMVGTIG GLTFHCLLKMMSWALQKMSSAAGVYIF IQSIAGLAGPPLAGLLVDQSKIYSRAFYS CAAGMALAAVCLALVRPCKMGLCQRH HSGETKVVS HRGKTLQDIPEDFLEMDLA KNEHRVHVQMEPV

2662	10713	A	3586	1	2472	GFVFLLLAPLSRLEFHKSRGLKNVFEGL EAEECFYKVHLDGGEELWVRPDAETT THQGRVSOEKHQALGCKWPKLCGDALC VILSAPSPIDHPKAECCRARRDWQAAPP AAPVRDPLGEASWAPESGQQMKEAAEL GVSCMGPDLEKLTLYEVKLRLQGCKAA QRPLGCTLLAIQGTLYQRIFSPLTQPELV NGKGWHLTQESLSQNGSLEFLTSEPHSP NPNEGSSRRQSLHTNANNMAFASEQFPN LPSGSGSRGFPGRARVLHDCQNCQRLT AGPAQLQGSRAANRRKALVSPSSSVARE DGFAEEMVFTYGIKTFGVFFNDLMSDF NESNSRISWIISICVFVLTFSAPLATVLSN RFGHRLVVM LGLLVSTGMVAASFSE VSHMYVAIGHISAIMALKERIGWRYSLLF VGLLQNLIVIFGALLRPIFIRGPASPKIVIQ ENRKEAQYMLENEKTRTSIDSIDSGVELT TSPKNVPTHNTLELEPKADMQQVLVKTS PRPSEKKAPLLDFSILKEKSFICYALFGLF ATLGFFAPSLYIIPLGISLGIDQDRAAFL STMAIAEVFGRIGAGFVLNREPIRKIYIEL ICVILLTVSLFAFTFATEFWGLMSCSIFFG FMVGTIGGULTFHCLLRMMSWAL/QKMS SAAGVYIFIQSIAGLAGPPLAGLLVDQSK IYSRAFYS CAAGMALAAVCLALVRPCK MGLCQHHHSGETKVVSHRGKTLQDIPE DFLEMDLAKNEHRVHVQMEPVVRRRFA AAGPAGLGAAGSDAFPAAREGPERRAG YSGPAAACFDFTAAPKREQRGPLSLVG LEM
2663	10714	A	3587	323	1303	STLYLPAMDTNQEEIPDLLALGTSWSS TLAAL EEPFSLPLHCGSPFLGWSRPELAP SACREVWREKPEWELGLRTVLAGQCEF RVGVGSGDSTRSSWPPLAPGNEGLSTR ASSCGGCTGSPSRAGPPVLCISQCALAA FPRGRARGLPAMPEPPPRRLGLLCSPEP PRLVPPPAPGHPVPLTTQGLRSTGKTHR DWQAAPPAAPVRDPLGEASWAPESANL VGKWRITFVSSSGTANAPISTLSKQTTGL YQSAGCGWGQNLGAKYRA/LCRPVKSD *HGRQTKDTGVRLSGKGLSNP*LFRVG TVGSHRPHFPTYMDGLASGV
2664	10715	A	3588	1	3552	
2665	10716	A	3589	375	646	KKSLLSINSRLQLVMKSGKYVLGYKQT LKMIRQ GKAKLVILANNC PALSGNNIEL GTACGKYRVCTLAIDPGDSDIIRSMPE QTGEK
2666	10717	A	359	1	366	KKQIFLELISISRVAGYKINTQKSAFLY NSNKQLNL*IK/DTMPFILAC/NK*KHLPL NLTK*VQEIYEGNYDTFMK*IED/DKQRN ISSW*KRFIKMPILPNLIYRYNAFPVKIS ESYLVDI
2667	10718	A	3590	75	335	LRILKFLSCSL SLLGWGPSL RQEDGGR KRRRKKSLESINLRLQLVMKSGKLLPGG TSQTLKMRQ GKAKLVILANN/CGPALR KSEIEYYCYVWLKTGC/HHPLTVGNNE LGATAACGKITYRVLHTGLFIDPG*LLTSF RKACPEQTC*KMVA AKEDEKSRWSRST LGSNSLWKSGKLLPGGTSQTLKMIQTRQ SEMWSFSLTTGPSFEEI
2668	10719	A	3591	1	2580	
2669	10720	A	3592	1	1386	

2670	10721	A	3593	2	1419	RPPGIRAPRQLHPAAGRRPDASARPRFRP TVLLHDPFQLSFPPLSYPSVFPVAVARV LPQRSGDYRAAGMPQLSGGGGGGGGDP ELCATDEMIPFKDEGDPQREKIFAEIVNP EEEGDLADIKSSLVNESEIIPASNGHEVA RQAQTSQEPYHDKAREHPDDGKHPDGG LYNKGPSYSSYSGYIMPMNMNDPYMS NGSLSPPIRPTSNKVPVQPSHAVHPLTP LITYSDEHFSPGSHPSHIPSDVNSKQGMS RHPPAPDIPTFYPLSPGGVGQITPPLGWQ GQPVYPITGGFRQPYPSLSGDTMSRFS HPMIPGPPGPHHTIGIPHPAIVTPQVKQ DHPHHSSDLMHVKPQPEQRKEQEPKRP PTKKPLNAFMLYMKEMRANVVAECTL KESAANQILGRRWHALSREEQAKYYEL ARKERQLHMQLYPGWSARDNYGKKKK RKREKLQESASGTGPRMTAAI
2671	10722	A	3594	59	435	STCPAPQSARVQWCNLSLQPPPTPTPR SSNSPASASQIAGITGVRHHTQLIFVFLV GDGGFHCVGSGWVSNCWPSGWRPLWP HLFLGFHKDLEVVGFLVFASISFRSWRW DLKNSSVLTHFFK
2672	10723	A	3595	54	442	
2673	10724	A	3596	360	1023	GQGRLPERGYLEAGVYRICGRQSRHED GTHRGAQVIEQRRKWLPALGFQPIILQL CGKRVPAAPSRASTGQPQASRAWGSLP/ HPQCGSDIRLRVRAEYCEHGPALQGV SRRPQALARQLDVFQATAVLRSRDLGS VVCDFSELSYLDFAWGDYLSGALLQA LRGVFLTEALREAVGREAVRLVSVDEA DYEAGRRRLLMEEEGRRRPTAS
2674	10725	A	3597	3	370	QMYCVFNREDACRY/GS/AIGVLAFLAS AFFLVVDAYFPQISNATDRKYLVIQDLF SGVLASLAYQRYKAGVDDFIQNYVDPT PDPNTAYASYPGASVDNYQPPFTQNAE TTEGYQPPPVY
2675	10726	A	3598	1	1356	
2676	10727	A	3599	3	706	GGSGGDGDMESGAYGAAKAGGSFDL RRFLTQPVVARAVVLIVFALIVFSCIYG EGYSNAHESKQMYCVFNREDACRYGS AIGVLAFLASAFFLVVDAYFPQISNATD RKYLVIQDLFLSALWTFWVFGFCFLT QWAVTKPKTVLVGADSVRAAITFSFFSI FSWGVLASLGYQRYKAGVDDFIQNYV DPTDPNTAYASYPGASVDNYQPPFT QNAETTEGYQPPPV
2677	10728	A	36	2	424	
2678	10729	A	360	241	583	NGPPFFFFFEMEFSLLLPRLECNGAISAH RNLRLPGSSDSPASAGLL*SQVAGITRL RHHD*LILY/FLVEMRFHRVG*AGLELLT SGDPPSSASQGAGITGMSHSAGHYGKIF
2679	10730	A	3602	1	171	RILMAINGKVFDTVTKGRKFYGPVKYHH VGKLLTAGEEPAIVYSDEEPPKDESARK ND
2680	10731	A	3603	3	253	LSLQEFGTSFAGRDASRGATFCLDKEA LKDEYDDLSDLTAAQQETLSDWESQFTF K/LLKEGEPTVYSDEEPPKDESARKND
2681	10732	A	3604	3	701	PARHSLAQREEKVASSGSLPAAQPLLSE IMAAEDVVATGADPSDLESGLLHEIFT SPLNLLLGL/CIFLLYKIVRGDQPAASG DSDDDEPPPLRLKRRDFTPAELRRFDG VQDPAPYSWAINGKVFDTVTKGRKFLT GPEGPYGVFAGRKCIQGALPTFLDKEA/ LKDEYDDLSDLTAAQQETLSDWESQF TFKYHHVGKLLKEGEPTVYSDEEPPKD ESARKND

2682	10733	A	3605	3	678	KRLPKMAEVQVLVLADGRAHSSLGARLAI AIVAKIQVLLGRKIVVVVRCEGRNISGNF YRWNKLYLGFPPSGMNTNPSRIGPYHF GAPSRILLAGTVRGMPLPHKTKAEAKAA LDRLKVFDDGIPPPYGQEKSGMVVPA LKVVRLKPTRKFLIWGRLAPEVGWK YQAVTATLEEKRKREKPRFHYRKKENSI MRLARKQAREETWRKKIDKYTEVLKTHG LLV
2683	10734	A	3606	114	353	
2684	10735	A	3607	104	342	
2685	10736	A	3608	211	241	NFNGRGGLAAGRRKKPDWLDSTLNS*PS H
2686	10737	A	3609	37	116	
2687	10738	A	361	654	942	CHACNPOHFGRPRQVDHLRSGV*DQPG QHGETPSLLKVIQKLAGHGGVHL*S*LLR RLRQENRLNLGGGGCSEPRSHHCTPAW VTE*DSVSRKKKK
2688	10739	A	3610	104	516	ALSSRGVMAEYGTLLQDLTNNITLEDLE QLKSAFKEADIPSEKSEEITGSAWFSFLE SHNKLDKDNLSYIEHIFEISRDPDLLTMV VDYRTRVLKISEEDELDTKLTRIPSAKKY KDIIRLPSEEEIKLAPPPKKA
2689	10740	A	3611	569	838	PTVLWEPPSFPPPPQGIPIHSG/PDILTGR RRASPSGLCYSENGGLTEEGSTRPPAH/S PGATVSSPPPPPPSSSLPCCLGNRHFD RV
2690	10741	A	3612	268	356	
2691	10742	A	3613	489	605	QLQVCYCT*RPYSGTRCGVSNVQLLLCS LLSHLCCSAS
2692	10743	A	3614	391	561	
2693	10744	A	3615	367	855	GARRQAHTMALKRINKELSDLARDPPA QCSAIGPVGDDMFHWKATINGDLMDK PIFKGGVFFLTIHFPTDYPFKTPKVAFT TRIHYPNINSNGSICLDILRSQWSPALTIS KVLLSICSLLCDPNPDIDPLVPEIARVY KTDRDKYNRISREWTOQYAM
2694	10745	A	3616	1002	1480	MLLLKTTERFEVSVCMACVYVSNLGKK QRSVSFLASGLMRVSTGPELRLHHSFVL TGDVGRRICRLLVGLFTKGDTSSKRVAHP FSPGP/CFLCDLAR/VGSSPKINRVPHFT RTQTSTQRSCTVFVWQRCSLVGPFQVTV FTMYFHHSLSRSISRFSSG
2695	10746	A	3617	223	415	
2696	10747	A	3618	1	858	
2697	10748	A	3619	144	1339	DPEQPDMEQPWPPPGPWSLPRAEGEAE ESDFDVFPSSPRCPQLPGGGAQMYSHGIE LACQKQKEFVKSSVACKWNLAEAQKL GSLALHNSESLDQEHAKAQTSIRTEGN GKKNWRQKEALRQREKMCLWSTDAI SKDVFNKSFINDKRDTEDEKSEFM QKYEQKIRHFGMLSRWDDSQRLSDHP YLVCEETAKYLILWCFHLEAEKKGALM EQIAHQAVVMQFIMEMAKNCNVDPRGC FRLFFQKAKAEEGYFEAFKNELEAFKS RVRLYSQSQSFPMTVQNHVPHSGVGS LLESLPQNPDLQYSISTALCSLNSVVH KEDDEPKMMGHCIWVKTAEAKCYFVT GKGGTWAIFLDTFMGVLALYFCSVFDG RERVLCFVNFF
2698	10749	A	362	1	2322	
2699	10750	A	3623	44	420	
2700	10751	A	3624	20	421	
2701	10752	A	3625	1	346	LRPQSAQSSFPSPGSPDVQLATLAQRV KEVLPHVPLGVIQRDLAKTGCVDLTITN LLEGAVAFMPEDITKGTQSLPTASASKF/ PRQESLQERKQALYEYARRRFTERRAQE

					AY
2702	10753	A	3626	162	461
2703	10754	A	3627	39	260
					DCKPVARPSTKAKTDQSGPFLSLLPHRY LSLSLTLRSSSPESMTCCWMEGREKEKSA SQ*VTTTFRASMSSYTA
2704	10755	A	3628	1	2160
					FRPGAPEAAVMELSSWPGERLFDShRL PGDCFLLLVLLLYAPVGFCLLVRLFLGI HVFLVSCALPDSVLRFRVVRTMCAVLGL VARQEDSGLRDHSVRVLISNHVTPFDHN IVNLLTTCSTVSESEADSATVRFGAQLK APLSPLAFPMEDTEALPLTPILYPTCQFF FIFLNIFLLAFSSPGSQPLLNKSPQAFVC WSRGFMEMNGRGEVLSLKRFCSTR LPPTPLLLFPEKKATNGREGLLRFSWPF SIQDVVQPLTLQVQRPLVS/VGECVLNRE SLGLEGEISHPWPWLRPHLMSPQTVSD ASWVSELLWSLFPFTVYQLVAKELGQT GTRLTPADKAEHMKRQRHPRLRPQSAQ SSFPPSPGSPDVQ/IWATLAQRVKEVLP H/VGPLGVIQRDLGMGKGPTLGDGHRE EKWVVKETKTGCVDLTITNLEGAVAF MPEDITKTGQSLPTASAKFPSSGPVTPQ PTALTFAKSSWARQESLQERKQALYEYA RRTFPQVTRSHIISTALEDPCLSKISTTCQ RGNSLRSCQRATMTSQPLRLAEYGPSP GESELAVNPFDDLFPSSRYELLKQRQA LPIWAARFTFLEQLESNPTGVVLVSSEPG SGKSTQIPQWCAEFALARGFQKGQVTVT QPYPLAARSLALRVADMDLTLGHEVG YSIPQEDCTGPNTLLRFCWDRLLQEVA STRGPGKLGRAGR
2705	10756	A	363	8453	9757
					APCLLGWSLPSRSAKTYAYLFHSPSRMP VYPKWVGADHADDIQYVFGKPFATPTG YRPQDRTVSKAMIAWNTNFAKTG*DVG *VQGGGPQPRRASHHEALFPHLPVEGLW ASHLTSPCIGIHVCLRMRTVGRAPSPCTC TASAQYAVRGMVPRASSEGGDGSQVQV ESRASAPWESPAPAQPLLTLQDPNMGD SAVPTHWEPTYTENSQYLEITKKMGSS MKRSLRTNFLRYWTLTYLALPTVTDQE ATPVPTGDSEATVPPTGDSETAPVPPT GDSGAPPVPPTGDSGAPPVPPTGDSGAPP VPPTGDSGAPPVPPTGDSGAPPVPPTGDS GAPPVPPTGDSGAPPVPPTGDAGPPVPP TGDSGAPPVPPTGDSGAPPVPTGDSETA VPPTGDSGAPPVPPTGDSEAPVPPTDD SKEAQMPAIVRF
2706	10757	C	3631	44	340
					MKCSQPXRCHFQSDQKCAPCPRAQTH WLEPPGRVQTISSMRNAQKGFADSIRLW RLPASGVGVVVSPEGAGDPSHLLDPPGH SAPYSPAPRQLSRVP*
2707	10758	C	3632	2037	2426
					MKCSQPPRCHFQSDQKCAPCPRAQTH WLEPPGRVQTISSMRNAQKGFADSIRLW RLPASGVGVVVSPIQTQEVAPEGMYLV GSSSGTLGGCRALTQVFLSLSLGCVCA CACACLCFSLWAHQDVSS*
2708	10759	A	3633	184	9818
					IEEPRDTRLQVCSGVHIWCLDKFKMRKH RHLPLVAVFCLFLSGFPTTHAQQQADV KNGAAADIIFLVDSSWTIGEEHFQLVREF LYDVVKSLAVGENDFHVALVQFNGNPH TEFLNNTYRTKQEVLSHISNMSYIGGTNQ TGKGLEIYMQSHLTKAAGSRAGDGVPO VIVVLTGDHSGDGLALPSAELKSADVNV FAIGVEDADEGALKEIASEPLNMHMFNL ENFTSLHDIVGNLVSCVHSSVSPERAGDT E

2709	10760	A	3637	312	805	GPQAGSSPEILLPEDNSLIRWAGAGCHTQ DSATTVTASWAPLCAGAGREEDGTPCV CLGRSARPKLVFGRPLRTSAALRPGACIP HGLLCYPREPVDPRPGSGRAWPPRSPSP/ CQDPRPSRSAPGSEPGW/CPDPPAPPRLV TLGRASPHLTLPRRAAPPPCRWRP
2710	10761	B	3639	199	286	XSELESALQMEPAAFQALYSAEKPKEDE EHLVFFCQMGKRGLQAHAGPESWIHW GSQLRWSL*
2711	10762	A	364	10	548	FRLVLSRLEGIGAILAH*NLCLLGSNDSP ASATRVAGITGRHHAPLIFVFLVEMGF RHVGQAGHKLLISGDPPA/SASQSAGITG VSH/ARLAALSNF*GLGQVPTPLKQATLL SLLDTSPLPAIFFLFF*DRFSSVTQAEV QWGDHCSLHP*PTGLKNDPPASASRLGTT RTRHHSR
2712	10763	A	3640	754	1082	GMVILCLGAPRTQPFQAQLPNLSAKLL AFPSTLSTPPVSELESALQMDQPAFQAL YSAEKPKEDEHLVFFCQMGKRGLQAT QLARSLGYTGARNYAGAYREWLEKES
2713	10764	A	3641	113	737	AGPDSFCNFSVCPSSSTAWILVLAQFLL SPTLLSPRMLTVALLALLCASASGNAIQ ARSSYSGEYSGGGKRFSGNSQDGP ITALRVVNTYYIVGLQVRYGKVWSDY VGGRNGLDEEIFLHPGESVIQVSGKYKW YLKEAGYLVPKGPFLSFGKSKGPSFN AVPLHPNTVVRFISGRSGSLIDAIGLHWG CFHTSCSRC
2714	10765	A	3642	1724	1818	
2715	10766	A	3643	1	894	RGESRVLWSELEGEAGGAGGWASSLNA RMDNRFATAFVIACVLSLISTIYMEG SIG TDFWYEYRSPGQENSSDLNKSIDEFIS DEADDATYNDAFVRYNGTVGFLRRVY SPYPKTLHWVLAHERTESFDVVTKCV SFTLATEQFMEKFVDPGK/HTNSRGLDLL RTYLWRCQFLLPFVSLGFDVLWGALIG LCAICICRSLYPSIATGILHLLAGLCTLGS VSCYVAGIELLHQKLELPDENVSGEFGWS FCLACVSAPLQFMASALFWAAHTNRK EYTLMKIAYRVGMSKKPACF
2716	10767	A	3644	323	898	
2717	10768	A	3645	816	1171	LFKHFVGPVANWGLPIAINDMKKSPG DYSVGRMTFALCICYSLTFMEILPYKVQ PSGTWASCFACHGTNEVRPSFIQEGRLI PNTRMDLKRASGINQWGKGKNKVFEGD SLCPGCC
2718	10769	A	3646	205	369	
2719	10770	A	3647	3	451	CSGAGAEPAANPRSPRSLVPSLESTSTSV PPAPGTMATDSWALAVDEQEAASG AVVKTNANAETDEEEKEDRAAQSLN KLIRSNLVDNTNQVEVLQDRPNPLYSG KSFEELRLKPQLLQGVYAMGFNQPSKIQ ENALPLMLAEPY
2720	10771	A	3648	1	186	
2721	10772	A	3649	2	261	SSANNISILGAFRSVTKWLS*THPL*FFCQ CLCLSPTYELALQTGKVEQMKGKYPPEL KLAYAVRGNKCEYGRRQLNSEQGRGLG V
2722	10773	A	365	252	934	LCASRLLPAPMLSLSHRISHPWPVGVH YGC*GGRSGSDIGSCRETGLCRGFSPGCI KTSTSPWAPAG*APSTGPSGQETCTAHS PFIPAPA*AQGLKF*GVTESICAGAAGTA GGTETAVSAGSPAGQAQPGPGAGQSLSA GSQMA*GSDHPGIWQTC*SVQGAFALD G*GG*LHPHP*GPATLPEGGGGVCPAA KNASGATREVPVAVLQAVHAPGATWLRP P
2723	10774	A	3650	1	2613	

2724	10775	A	3651	3	550	LCSSR/DEKFKALCNLPG/AITMAQAMIF CHTRKTAISWLAELKEGHQVALLSGE MMVEQRAAVIERFREGKEKVLVTNVC ARGEQRTCPTWSARLGVPGPIRARNPCI QGSRMVSGRWVGLVTLFLSRDCLDFP EVVRTHTCQVRWLMPIPRQENCLNPG DRGCSEPRMCYSTPSWVTE
2725	10776	A	3652	1	1571	CRGAGAEPANPRSPRSLVPSLEYTSTSV PPAPGTMATDSWALAVDEQEAASLS NLHLKEEKIKPDTNGAIVVKTANAEKT DEEEKEDRAAQSLNKLIRSNLVDNTNQ VEVLQRDPNSPLYSVKSFEELWLKPQLS QGVYAMGFNRPSKIENALPLMLAEPQ NLIAQSQSGTGKTSPLVLAMLSRIVEPI RPDTPQCLCFPTYEAGGFKQKGVIEQM GKFYPELKLAYAVRGNKLERGQKISEQI VIGTPGT/VGLNWCFQLKFIDPKKIKVVF LDEADVMATQGHQDQSIQRMPLPRNC QMLLFSATFEDSVWKFAQKVVPDPNVIK LKREEETLDTIKQYYVLCSSRDEKFQAL CNLYGAIITIAQAMIFCHTRKTAISWLAEE LASKEGHQVVMLSGEMMVEQRAAVIERF REGKEKVLVT/TPNLCSRGIDVDQVSIVI NFDLPVDKDGNDNETYLHRIJGRTARF GKVRGLAVNMVDSK\HSMNILNRIQEH FNKKIERLDTDDLDEIEEN
2726	10777	A	3653	3	421	
2727	10778	A	3654	209	435	
2728	10779	A	3655	126	775	APAKVRTAQEDRDTFSSQRTRWKEQNTI DNMALLGPKGLLFLAAFIITSDWIPLGV NSQRGDDVTQATPETFTEDPNLVNDPA ATDETVLAVLADIAPSTDDLASLSEKNT TAECWDEKFTCTRLYSCASGPVNQMH FIQLCFHPVLRMYIVQPRENCSSVLC KGTPKPMKDELCRQMAGLPPLGRLARRP QLLPDFPCENVDLQRPNGL
2729	10780	A	366	169	457	SLEVSLGDHFQKCRFLEKRRERFWKGMFS FCSMAVSGFLAAGAGLKPRSG/WH*VFH SPRRSWTENFKFORDEVASPLGAWRAL TKEKGGAQPLEGL
2730	10781	C	3660	162	425	MVGPSLHAGXXXVYIPRFLYIRSWLPCIF FSGGVTVGNIGRQLAMGVPEKPIVIESSK PXILEXGRFLEENLXLVDYXKGLSFFLK *
2731	10782	A	3661	89	308	
2732	10783	A	3662	2	454	
2733	10784	A	3663	570	1418	PMPRLHDFWSCSCAHSARRRGPPRAIA AGLAAKVGEIIVFVSGPSLMAVLSASD ADPAPRGRSAVKSGPYPGSPYPNTWHHS LMQKSLVLFVSGEVLALVNLQIQNRV TLFPEEVIATIFSSAWVPPCCGTAPAD VGLLYPCIDSHLGEPHKFKERMGOVSMR CIAVFVGINHASAKLDFANNVQLSLTLA ALSLGLWWTFDRSRSGGLGUTIAFLAT LUTQFLVYNGVYQYTSDFLYIRSWLPCA IFFSGSVTVGNIGRQLGYGVFLEKPHSD
2734	10785	A	3664	195	462	RIFSMTSGRLRWRCTWRPATALWSASLR LGTSSMHPSPRSISLP/PVHVHTHNSGKE VLGLQVQRSRSGTGACSQAGSGAVQG GNWCIF
2735	10786	A	3665	12102	12327	
2736	10787	A	3666	535	992	RIFSMTSGRLRWRCTWRPATALWSAISL RLGTSSMHPSPRSISLPLSMMLSVPLPS NTRGLSPTALVRSPNSEHATSCPRHL WRCRAPLRSPSPLGRLPGATPGVPSHVH THNSGKEVLGLQVQRSRSGTGACSQAG GSGAVQGGNWCIF
2737	10788	A	3669	76	419	

2738	10789	A	367	186	370	QIRETS GTGT*YTSASQSAGIEVSHHAR QMFQFYSQKYTL PNCKL*ILMFKIKFFL TQK
2739	10790	A	3670	71	350	AFIPAMAELIQKKLQGEVEKYQQLQKDL SKSMSGRQKLEAQLTENNIVKEKRYES QLRDLERQSEQQRETLAQLQOQEFQRAQA AKAGAPGKA
2740	10791	A	3671	334	1191	GLLPHLGPRVQRLPRLSLSTLACGLTRGP HPFLLPQIHHLTRIVGIGGTFDVS KL PFL SSPDLSKMSGRQKLEAQLTEYNIKEV RDWDLWGEEGPVLAMVLITYVPSLHQE LALLDGSNVVFKLLGPVLVKQELGEARA TVGKRLDYITAEM*VFIPPPCAAPCDASE PLE*RC*TIAEQLSIVAPSPVPPTLSFPF*P PFFSLPWISRFSTYLFLAFSTLHSESY*FLP FCLSPLSLLSKRYESQLRDLERQSEQQRE TLAQLQOQEFQRAQA AKAGAPGKA
2741	10792	A	3672	210	617	AFIPAMAELIQKKLQGEVEKYQQLQKD LSKMSGRQKLEAQLTENNIVKEELALL DGSNVVFKLLGPVLVKQELGEARATV GKRLDYITAEIKRYESQLRDLERQSEQQR ETLAQLQOQEFQRAQA AKAGAPGKA
2742	10793	A	3673	3	266	
2743	10794	A	3674	31	500	ARVTA AVSAAVAKRVWRDGFDCSGY YSLTTILLVQPTKRPEGRTYADYESVNE CMEGVCKMYEEHLKRMNPNNGPSI/TH NTTSQ LFD FID\DLADLSCLVYRAIDTQT YQPYNKDWIKDEDP TVLLSSGKAQQA REIIVVGSHWGGWGGAWDTGV
2744	10795	A	3678	1	134	
2745	10796	A	3679	162	437	RRGLFPAGPGPRQEPSRASSMP SERLRN IKDFLLTARRKDAKS\VKIKKNKDNVVK FKVRC SRYLLHPWSSPDKEKAELKQKQ LPPRFGK
2746	10797	A	368	150	799	QC*DPETSETV*EKL RAGRHRQRCCHGGQ SCFDKSATRALPPPRKWRHGRTRCAATK RTRLGEMAVLGP*E*ROPEEFPRTTSLA EPTVLSRRKCRPSEKRGSA TEKFGATSA VTENPPLGAAGERANKTL/RCCHRD TDF RTPASDGERRRSHTGPI NRSLAMRMGK GGSIGTENRADWAGPGCKVCESCS/RVL HLCVYGSHHRIWHMEGYQHMLV
2747	10798	A	3680	60	216	
2748	10799	A	3681	505	794	NVVECLFKDALPQLSADRFLASSILLGDL GVEEVHFSVSNLTGEEL WHLLRSTSLGI ASPPIHEVPFLEV DGDRTKTQVFPLTNLH VRAHASAHAS
2749	10800	A	3682	685	1484	LRLTFPEFSHTKVRTMSLFP SPLLLLSM VAASYSETVTCEDAQKTCPAVIACSSPGI NGFPGKDGRDGTKEGEGEPGQGLRGLQ GPPGKLGPPGNPGSPGPKGQKGD PG KSPDGDSS\QAASERKALQTEMARIKKW LTFSLGKQVGNKFFLTNGEIMTFEKVKA LCVKFQASVATPRMAAENGAIQNLKEE AFLGMPDEKTEGQFVDLTGNRLTYTNW NEGEPNNAGS\DEDCVLLKNGIQWND SPC\STSHLAVCEFP I
2750	10801	A	3683	427	751	
2751	10802	A	3684	31	558	EFVPHSEKMLYDQAQLAVAYLYAFQLS GDEFYSDVAKGILQYVARSLSHRSGGFY SAEDADSPPERGQRPKEGAYVWTVKE VQQLPEPVLGATEPLTSGQLLMKHYCL TEAGNISPSQDPKGETCRARMLLDRPVL RWELTAARFGLDV/EKAVRTLLNTGLEK LFQARKHRPKP

2752	10803	A	3685	3	399	KCVCLLTAFSERMRRVPVALPEMVRALS AQQQTCLKQIV/VWRPSGQRTPKALVQC VHSVYIPNKVLILADGDPSSFLSRQLPFLS TLRRLEDQATAYVCENQACSVPTDPCE LRKLLHPLTCPYPLGWGRR
2753	10804	A	3686	2	2238	NVAAMLGARAWLVRVLLLPRAGAGLA ASRRGSSSRDKDRSATVSSSVMPAGGK GSHPSSTPQRPVNRILIHEKSPYLLQHAYN PVDWYPWGQEAFFDKARKENKPIFLSVG YSTCHWCHMMEEESFQNEEIGRLLSEDF VSVKVDREERPDVDKVMYTFVQATSSG GGWPMNVWLTPNLQPCVGGTYFPED GLTRVGFRVLLRREQWKQNKNTLLEN SQRVTALLARSEISVGDRQLPPSAATVN NRCFQQLDEGYDEEYGGFAEAPKFPTPV ILSFLFSYWLSHRLTQDGSRAQQMALHT LKMMANGGIRDHVGQGFHRYSTDRQW HVPHFEMLYDQAQLAVAYSQAFQLSG DEFYSDVAKGILQYVARSLSHRSGGFYS AEDADSPPERGQRPKEGAYYVWTVKEV QQLLPEPVLGATEPLTSGQLLMKHYGLT EAGNISPSQACELADKGHSPQDPKGELQ GQNVLTVRYSLELTAARFGLDVEAVRTL LNSGLEKLFQARKHRPKPHLDSKMLAA WNGLMVSGYAVTGAVLGRPQLINYAT NGAKFLKRHMFDVASGRLDADLLHR/H LGGLWSTATPPCWGFLEDYAFVVRGLL DLYEASQESAWLEWALRLQDTQDRLFW DSQGGGYFCSEADWGAGLPLRLKDAQ DEAEPSANSVSAHNLLRLHGFTGHKDW MDKCVCLLTAFSERMRRVPVALPEMVR ALSAQQQTCLKQIVICGDRQAKDTKALGA VRPLCLHS
2754	10805	A	3687	5	188	
2755	10806	A	3688	132	341	GFTSFISRLSCLSFCLLLET/CPVTCWCWE APRCNQKCTDPAARRDPQTCASQDRLR CAPCTCHQPLASR
2756	10807	C	3689	4	204	MCFQRKSYFHIQTLYCPLICISALRYSTG PAPAMWKCHTAPVQKDWTPLPITLISS PNFLTILNL*
2757	10808	A	369	1200	1678	RYKLLSYRKPEAIEQKENIPFQNLRSRFS KNLHFWK*SPKETSRLYHECLQLNSSCLI LTLAYPVQII/CHLFLDEPGRMSDQRRQA NVPEMGFHHVGQ/ACLNLSTS\DRPASAS QSARIIEVSHHARQMFQFYSQKYTLPC CKL*ILMFKIKFLTQKQN
2758	10809	C	3690	57	209	MEVXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXGRLLFGPL*
2759	10810	A	3691	363	424	
2760	10811	A	3692	2	264	KFSLIKLRKENFPTARICRLVYPLYPLKIF IFPKALNFCREVGPIPPPKKGSFPKIPKV AFNRPPLRKKIIPSQPALNWGPVRVP
2761	10812	A	3695	2	201	GRVGSDESCRQQQGDTKRRRLSSYPWR RRQRWRRRRRTSSRRKPQFLRQRQRPRQ ARRRWRATRFA
2762	10813	A	3696	31	445	EKAVVTSAASSLVYTVYTAQAPAPRSFHP FCSTWSAKEPNTTAGEGGSTNECQCLSA /CPGANCPGLGTLKSPQNCPSSSLPRPPLP ACRGSYESVWARLLQSVHAIGQRLRES WSPKLYWVHPPQEVVGAFRTFLFLV
2763	10814	A	3697	73	404	AYSRTGSSSLSTMNQTAILICLIFLTLSGI QGVPLSRTVRCTCISISNPVNPRSLEKL EIIIPASQFCPRVEIATMKKKGEKRLNP ESKAIKNLLKAVSKERSKRSP
2764	10815	C	3699	250	495	
2765	10816	B	37	44	307	MVAVSCRQRPTSRPAWGKVGHAHVR MCAEALERMFLSFPTTKTYFPFHDLSHG FCPLRATGKKVADALTNAVAVHVRHA

						QRRCP*
2766	10817	A	370	1	1107	MTLEATHLLLRVLLVLLASGGSLFQSP VKSILGVAVTVLLLLLLALLINRYLQK ARGRARKPYTEDVSVDKKTETWEWAR GEGESYHVVDDVQKEKTTDRMIRSSSM CVHKINTSVSMCAQETPNSSKKAKLGQK IPVQGKDEILHKALCFCPWLKGKGMEPL RLLLLVFVTELSGAHNTTVFQGVAGQSL QVSCPYPDSMKHWGRRKAWCRQLGEKG PCQRVVSSTTCGLLSFLRRWNWEHSHS QTIPWGGTLTITLRNLQPHDAGLYQCQS LHGSEADTLRKVLVEVLADPLDHRDAG DLWFPGLRASRMPMWSTASPLRIAR EGR*WEEKPRRSPTRDQPSLHTCHLATR TPCSALARDYSA
2767	10818	A	3700	226	854	RVPGLNMSGIALSRLAQERKAWRKDH PFGFVAVPTKNPDGTMNLMNWECAIPG KKGTPWEGGLFKLRMLFKDEYPSPPKC KFGPPLFPPNCVTSGASCLASLEEDKDW RPAITIKQILLGIQELLNEPNIQDPAQAEA YTIYCQNRVEYEKRVRAQAKKFAPSCRS SLEPSRTWAVLLLSLRPQVSISVLRHFLC VYMAFCLCCCLE
2768	10819	A	3701	813	1637	TCQGIALSRLAQEYKAWRKDHFPFGYN AVPTKNPDGTMNLMNWECAIPGKKGT PWEGGLFKLRMLFKDDYPSPPKCKFE PPLFSRIVYPSGAKCACPSLEEDQRTW RPSPTTIQTRFLLRNYRNLKWNPNQDP SFQAEA/YTIYCQNRV/ESYEKRVSTKP RKFCAPHKQRPCGNRQKERDWFQQLV YNIFCKSKVCSHTMTSHLGGVGRAPSSH CPRGVRSRIRLNCPSIQSSFLRCFCIF GLLCKTRLFILMSSISTAVKL
2769	10820	B	3702	236	362	KQEPQIPCQGGKDAAVLQGSQPSLAGIR TTRLRDPKWKWPKGX*
2770	10821	A	3703	1	808	TPPFLAMAPALLLIPALASFILAFGTGV EFVRFTSLRPLLGIPESGGPDARQGWL AALQDRSILAPLAWDLGLLLFVGQHSL MAAERVKAWTSRYFGVLQRSLYVACTA LALQLVMRYWEPIKGPVLWEARAEPW ATWVPLLCFVLHVISWLLIFSIFLVFDYA ELMGLKQVYYHVLGLGEPLALKSPRAL RLFSLRHPVCVELLTVLWVPTLGTDR LLAFLTLTYLGLAHGLDQQLRYLRA QLQRKLHLLSRPDGEAE
2771	10822	A	3704	221	1728	GQAGCSDTMGSCCCLNRDSVPDNHPT KFKVTNVDDGVELGSGVMELTQSELV LHLHREAVRWPYLCLRRYGYDSNLFSE ESGRRRCQTGHGIFAFKCSRAEEIFNLQD LMQCNSINVMEEPVIITRNSHPAELDLPR APQPPNALGYNVSSFSNGCPGEGPRFSA PQRLSTSSLRHPSLGEESTHALIAPDEQS HTYVNTPASEDDHRRGRHCLQPLPEGQ APFLPQARGPDQRPQVFLQPGQVKFVL GPTPARRHVMVKCQGLCPSLHDPHHNN NNEAPSECPAQPKCTYENVVTGGLWRGA GWRLSPEEPGWNGLAHRRRAALLHYENL PPLPPVWESQAQQLGGEAGDDGDSRDG LTPSSNGFPDGEEDETPLQKPTSTRAAIR SHGSFPVPLTRRRGSPRVFNDFRRPGPE PPRQLNYIQVKLKGWGGDRPKGPQNP SPQAPMPTTHPARSSDSYAVIDLKKTV MSNLQRALPRDDGTARKTRHNSTDLPL

2772	10823	A	3705	1143	1849	PAILSPNLDDLNFVSRASVPTLAPSAPSA SSSPARIPAATRQGRSPRIPPAPSNEASP APGRPRVPGAAPPRFPKPTIQASGADRA VDCGILKLQKSPARLARPRWPRRPSKRF WSAAGSVEEQPKPKAP/PAKSPEQSPQL SVLPLATITPQAYGASFEKMKNLKTTRRG GRSRWHFFPNVIPQAPSLKWGFQTSAS SAEVFHVDRSLASHKMGPGRRPRSPLW APPFWNPRH
2773	10824	A	3706	130	360	SLPKKKNPDLHGFVGKFYQTFKEKIPASS SSNKF/PQDIYEASITL/TPKPDQDFRKKEN CSSVSLIIFPEIINKILEN
2774	10825	A	3707	46	292	DQASSGNGVTMIARRNPDTLRFPLDEAR SLPPPCLTDPRLLYIGFLGYCSGLIDNVI RRRPIATADKKTGYEIFEKHFPIR
2775	10826	A	3708	269	476	STCLGLPRCWNYRREQPRLVYM*FVHL YYF
2776	10827	A	3709	448	894	DQASSGNGVTMIARRNPEPLRFLPDEAR SLPPPCLTDPRLLYIGFLGYCSGLIDNVIR RRPIATAGLHRQLLYINGLFFLLGYL VKREDYLYAVRDREMFGIYGNLHPEDF FLKEDKKTGYEIFLKNSHPTLKVLOKCL LAPSFH
2777	10828	A	371	2	1309	EQQDLQDPLEVFHPTVEAAEALHIQEP GGEPSQPTQLPGGAPNTRPPHPQALWS V*RAPEQELHQDGRQPTG*QWLRTCSLG WPEAQLPAHLIGQADWPSQRPP*DPE*TP PRPQQNPGPSNWRTCFATPSCTGWA*AT TQIRMIENGKPELPGPPSGEVPLGQQQVG PGVPSGFGPGQAPPGLLHSHNNHQS FNEFLFPWFGGGEAGPYNGHSASSTTP CPTGRCKPATFRRRH*PPGHPVWATTKS RGM/TAATAGPQWGLGNTARHPDGEA EPGS*ARAQLASNPAPHLRVP*PQLRLPH SPFPFWVPKGCRTQRPMTGYAWAH ELRPALPPQPPRGTP*SFFLVHSPACPAQ ALPPNLYCPGGGWEVEAQHPAQMTVPF LEAPHPHWPTGG*VSPYPSGPAQGAAS EVGGCLSIKETPCNV
2778	10829	A	3714	1	948	
2779	10830	A	3715	644	2034	AIETQAITDNCSEERKTFNLNVQMNSMD IRCSDIHQDGTQGPSVIAFISYSSLGNIINA TFFEEMDKKDQVYLSQVVSAAIGPKR NVSLSKSVTLTFQHVKMTPTSKKVFCVY WKSTGAG/CSQWSRDGCFILHVNKSH MCNCSHLSSFAVLMALTSQEEDPVLTVI TYVGLSVSLCLLALALTLFLCKAIQNT STSLHLQLSLCLFLAHLFLVAIDQTGHK VLCSHIAGTLHYLYLATLTWMLLEALYL FLTARNLTVVNYSSINRFMKKLMFPVGY GVPVTVVAISAASRPHLYGTADRCWLH LDQGFMSWFLGPVCAIFSANLVLFILVF WILKRKLSSLNSEVSTIQNTRMLAFKAT AQLFILGCTWCLGLLQVGPAAQVMAYL FTIINSLQGFIFLVYCL/LSAQQVQKQY QKWFREIVKSKSESETYTLSSKMGPDSK PSEGDFVFPRTSEEKIL
2780	10831	A	3716	1	451	FFFFFFVRQDLALSPRLECNGIIFAHCNLC LPDSSDPPVTSFAQVARTTGRNYYAQLNL YFFVETEFAMLTRAGLNLSSRGPLASA SQSVGDYRINSHHAQLIFCIGRDRIVSL WCPEWSQTPEFKRSACLPCWDYRGEP PHPVPSAL
2781	10832	A	3717	1	5898	
2782	10833	A	3718	1	333	

2783	10834	A	3719	1	5699	VNDNTNTAGSPGEVLSRRVCNLLKTALR PDMWPKSELKLQWFDKLLMTVEQPNQV NYGNICTGLEVLFSLLTVLQSPAILSSFKP LQRGIAACMTCGNTKVLRAVHSLLSRL MSIFPTEPSTSSVASKYEELECLYAAVGK VIYEGLTNYEKATNANPSQLFGDQGSW VTLAPGTLMLKSACSNNPSYIDRLISVF MRSLOKQMVREHLNPQAASGSTEATSGT SELVMLSLELVKTRLAVMSMEMRKNFI QAIL
2784	10835	A	372	475	928	NLVACSLPISPETLSPVPLTPKPSGLLALS LGLAFLSCPLATPSPLTPKQGTAGPPQ PCPCSLAPQTLYLSRRRLGGWRPSIPAQ MTPINRPESQTPVFLEAPHPHWPTGG*VS PYPSGPAQGGAASEVGGCLSIKETPCNV KKKKKK
2785	10836	A	3720	109	11749	ARRGERRLVELMDPILFSGEANQPKRKM AFVATQGATEVDQTTLMKKYLQFVAAL TDVNTPDETKLMMHEVSENFENGTSPP QYSTFLEHIIIPRVLTFLODGEVQFLQEK AQQLRKLVLIIHRIPTNEHLRPHTKNVL SVMFRFLETENEENVLICLRHIIELHKQFR PPITQEIHHFLDFVKQIYKELPKVVNRYF ENPQVIPENTVPPPEMVGMITTIAVKVNP EREDSETRTHSIIPRGSLSLKVLAEAL
2786	10837	A	3721	106	11708	
2787	10838	A	3722	2	581	RRFERRPMRPHEVYTPPLVLQPLSLVSP WKSSQHIFRVLNTNIDGRKNSPLPITA HLRVWARRYAHVVLKADIDLTKVRAG ELTAEDEIVERVIT/ISMQNPROYKDPKTG FFEQDKKDVKDWKITARVLAQWVWTT SRERPGRLEERFRAHKKGLRHFLGGLS CSEGQAHPRTWPAVGRHRGASAGARR
2788	10839	A	3723	6	297	GIRPRKREQAASEDADKGPKEPLEYGKA KLSFQSCCEGKAFQRHDHLARHSHLAH LKDKARPFQCRYCVKSFTQNYDILLRHE RLHMKRRSKQALNSY
2789	10840	A	3724	201	403	
2790	10841	C	3725	78	422	
2791	10842	A	3726	591	966	EVLVTMALTRPSAASSKPQPSSPWQCPL DSSHWPPSAHLPTSYSGREGDKHTLSK RELKELIQKGAPPLASKLQDAEIAIARM EDLDRNKDQEVNFPKRYVTFPGGAF ESTIEGLKRVEK
2792	10843	A	3728	165	828	KEKARGRPKPLLLPITSATTAMGLTISS LFSRLFGKKQMRILMVGLDVAAGKANTIL YKLKLGEIVTTIPTIGFGVKTIGYRNICF HSMGMLGGPDRIPLWKHYFQNTQGLI FVVDSNDRERIQEVADELHKMLLVDEL RDPVLLLFANKQDALPNAMAISEMTDK LWLQSLRNRTWYVQATCATQGTGLYEG LDWLSNELSKQLNEIGYLTQGPWFG
2793	10844	A	3729	191	1574	GVSRODLTRLFGFSSPQLKKKLDWLS EDMNYARFITAASARRNPSPIRTMTDILS RGPKSMISLAGGLPNPNMFPKTAVITVE NGKTIQFGEEMMKRALQYSPSAGIPELL SWLKLQQLIKLHNPTIHYPPSQGQMDLC VTSGSQGLCKVFEMIINPGDNVLLDEP AYSGTLQSLHPLGCNIINVASDESGIVPD SLRDILSRWKPEDAKNPQKNTPKFLYYC FQMGNNPTGNSLTSEKKEIYELARKYD FLIIEDDPYYFLQFNKFRVPTFLSMDVDG RVIRADSFSKIISGLRIGFLTGPKPLIERV ILHIQVSTLHPSTFNQLMISQLLHEWGEE GFMHVDREVDFYSNQKDAILAAADKW LTGLAEWHVPAAGMFLWIKVKGINOVK ELIERKRPLKMGVLMPLIGNAFLRRIAQ LPSPYLASFSSASPIEQMDVAFQVLAQ LIKESL

2794	10845	A	373	2	643	PICLFSRPTLRPSRSKVSLEIEGRGANMAA RWRFWCVSVTMVVALLIVCDVPSASAQ RKKEMLSEKVSQLMWNTNRPVIRM NGDKFRRLVKAPPARNYSVIVMFTA/LQ LHRQ/CVVCKQADEEFQILANSWRYS/ SAFTNKDIFFAM/VDFDEGS/DMYFQML KH*ISAPNFPSTFLQKGPKRG/DTYELQ VRGFFQLRQISPWADRTDVQY
2795	10846	A	3730	2	454	RSFFFFCEVGSWVGSMRVVMARLLSEG EQCIPTACAAFAQQPGGRPRRLAGVGE GGPQCSWVNYRCTLEFLVSLGTDLAR GRGNSATGPITAPADSKQLSCKTFIAVLS LSKEAGFCNVVQGWVSTSWGSSSPSPVQ FFPKLLEFTGQ
2796	10847	A	3731	379	640	DGVSLCYPGWNTVAQSQLTVGSISWAQ VIL/QTQPPRVAVAPGRITTVYRDRVSLCC PGWSGLIVLGLKPPRVLGITGMGSPQPRP GI
2797	10848	A	3732	373	598	YPCPPE/RCAQRHGQACLLPSLERKCVIS LPPSPHQTFAGPKGLGHGDALSGLIWP QTPSCEPTQTPKQSNQLVN
2798	10849	A	3733	2	444	
2799	10850	A	3734	151	485	SPRGHYQLLLSGRALADRYRRIYTAALN DRDQGGGSAGHPAS/RSENLENTVIIPDI KLHSNPSAFNIYCNVRHCVLEWQKKEIS LAAASKNSVQSGESDSDEEEESKEPPIN
2800	10851	A	3735	1	176	
2801	10852	A	3736	1	6570	
2802	10853	A	3737	114	14222	AAPVAAPGALFMPVPDGSVAAAGLGLG LPAADSPGHYQLLLSGRALADRYRRIYT AALNDRDQGGGSAGHPASRNKKILNKK KLKRKQKSKSVKTRSKSENLENTVIIPD IKLHSNPSAFNIYCNVRHCVLEWQKKEIS LAAASKNSVQSGESDSDEEEESKEPIKL PKIIEVGLCEVFELIKETRFHPSLCLRS QALLNVLQGGQPEVLQSEPPEVLESFLQ LLEITVRSTGMNDSTGQSLTALSCACL
2803	10854	A	3738	373	662	CRKNSCYQAQNFNLRIPFSTTKLINLFHF *NDSQKST*/SDSHLARSSQFCSLN*NY*I *TAKSHDVVCTRQHFPSPLESSEYIWHVKE KKYNPTAAAI
2804	10855	A	3739	29	658	LSVASLSFLPNASAEDTMSRLSRSLWA ATCLGVLCVLSADKNTTQHPNVTTLAPI SNVTSAPVTSPLVTTAPETCEGRNSCV SCFNVSVVNTTFCFWIDCKDESYCSHNS TVSDACQVGNITDFCSVSTAATPVPTANS TAKTHSSSPPLLQLPRQLLHQGTNTNTV NSITSQPVRKSTFDAASFIGGIVLVLEIRC HTRNYIPDLKK
2805	10856	A	374	562	766	GKSISRYPLYPFVIFYFYFLETSCSSAQA GVQWRNLGSLQSPSGSSNSPASAS*VA ETTGERHHAQ
2806	10857	A	3740	1	183	KKGLSPEQDIKFSGHVSWVGKTSMEVK MQMFQPAFVNPLIPESPEEEELFRQGE TLICL

2807	10858	A	3741	185	1548	LNQGPQNPKKQGNFHIHETSSSIHANHV RDKLREIVKASTNWRDHVKAMEERKLL HSFLAKSQDGLPPRRMKDSYIEVLLPLGS EPELREKYLTQNTVRFGRILEDLSLGR FLFCYMHNKIHSKMSPLSIVTALVDKID MCKKSLSPQDIKFSGHVSWVGKTSME VKMQMFQLHGDEFPCVLDATFVMVAR DSENKGPAFVNPLIPESPEEEELFRQGE NKGRRIAFSSTSLKMAPSAEERTTIE MFLSTLDPKTISFRSRVLPNGSVGWEN SKLKEFWEI/CAHPSGSRNIFNRILVGFLM RKAYELAWATACSVFG/GRPFVGA VDD IMFQNPVEVGSLFLSSQVCFTQNNYI QVRVHSEVALPLQEKPAIQPHPMSEFHH RFHVGGKESAPL/VFPPTYGESPCCTLD GQRAFPTMSGPATLEKGP TLVEPLRTP TIC
2808	10859	A	3743	2	286	TALQRHSEPSKLT FVGELAHGRFSAK/M GTLALGVYHGLPASHMELAQELMETCY QMNRMETGLSPEIVHFNLYPQPGRRDV EVKPADRHNLRLP
2809	10860	A	3744	1	287	
2810	10861	A	3745	1	339	RPLLAFRLEEEQKMRPEIAGLK PANPPVL PAPQKADTDPENLPGMG*PSGQPRVQL CPGS*SLRCPQSKGLEGLP*LQRPEAPGL ALVFTSWTQGSSWPPRRGLGLDGKSV
2811	10862	A	3746	2	991	
2812	10863	A	3747	1	2296	FRVDGAAMAACEGRRSGALGSSQSDFL TPPVGGAPWAVATTVMYPPPPPPHRD FISVTLSESYDNSKSWRRRSCWKKWK QLSRLQRNMILFLLAFLFCGLLFYINLA DHWKALAFRLEEEQKMRPEFAGLK PAN PPVLPAPQKADTDPENLPEISSQKTQRHI QRGPPHLQIRPPSQDLKDGTQEEATKRQ EAPVDPRPEGDPQRTVISWRGAVIEPEQ GTLPSSRAEVPTKPLPPARTQGTVPVH LNYRQKGVIDVLLHAWKGYRKFAWGH DDLKPVSRSFSEWFGGLGLTLIDALDTMW ILGLRKEFEEARKWVSKKLHFEKDVDVN LFESTIRILGGLLSAYHLSGDSLFLRKA DFGNRLMPAFRTPSKIPYSDVNI GTGVA HPPRWTS DSTVAEVT SIQLEFREL SRLTG DKKFQEA VEKVTQHIGLSGKKGDLVP LFHQLP TVGLFTHLG VFTLGARADSYE YLLKQW IQGGKQETQLLEDYVEAIEGVR THLLRHSEPSKLT FVGELAHGRFSAKMD HLVCFLPGTLALGVYHGLPASHMELAQE LMETCYQMNRMETGLSPEIVHFNLYP QPGRRDVEVKPADRHNLRLPETVESLFY LYRVTGDRKYQDWGWEILQSF SRFTRV PSGGYSSINNVQDPQKPEPRDKMESFFL GETLKYLFLFSDDPNLLSLDAYVFNTE AHPLPIWTPGLGWMAAGVGTSGGQRHL AGSVAFSKGPRRHRQPPSGPGSELGLGF LLVSALIRTP
2813	10864	A	375	23	483	NGVLLSSRLKCSGAISAHCSLCLLGSSNS PTSASQVAGITGAHHHTWANFCI/YFF*V EMGFHHVGQAGLELLTSDDPALASQS AGITG/GEHLRLAVTYLNKHERGSFLSS CLPSAWWKWLCSCFWVPKCLALCHF KHYGRRKQVGHTSK
2814	10865	C	3753	150	584	MHPSCCPCICKPFSTLVKSHVTASASSVP DSTCLRRGQSQCEVVLWQDRVSFQARE LKAVINSAVQTSSCFIRHLPRSVSSAIAEG VTSVAIISSSSPSAGGALLWSAPFFETQQT AVAPPASLETLGFHLQPHLLHTAGSFG**
2815	10866	A	3754	292	483	

2816	10867	A	3755	84	316	GGKLINIKYLFYTSY*FLSFPWHFLLAAS RAQQGEVMRLACRLDPKTSFOMAGEW LKYQLSTFLDVAGSVNWKFFSLL
2817	10868	A	3756	423	1186	
2818	10869	A	3757	222	435	PCFLALAVCCVSKKGADHSSAPPADGD DEEMMATEVTPSAMAELTDLGKCLMKH EDVCTALLITAFHSLAW
2819	10870	A	3758	1	936	MAEPFTKALDMLDAEKSAILGLPQPLLE LNDSPVFKTVLERMQRFFSTLYEN/CECP WVGLFI*CTEHYEALVSPILGPLFTYLHC GEDEAADENPESQEMLEEQVRLMLTRE VMDLITVCCVSKKGADHSSAPPADGDD EEMMATEVTPSAMAELTDLGKCLMKHE VLSGTLADAVTWLFTSVLKGQMHGQ HDGCMASLVHLAFQIYEALRPRYLEIRA VMEQIPEIQKDSLQDFDCKLLNPSLQKV ADKRRKDQFKRLIAGCIGKPLGEQFRKE VHIKNLPSLFKKTCPMLETEVLDNDGGG LATIFEP
2820	10871	A	3759	30	3498	VAIVRHFGQLQILEHVVKFRWNGMSRLEK VYLKNSVMELIANGTLNILEEENHIKDAL SRIVVEMIKREWPOHWPDMIELDLTSK QGETQTELVMFILLRLAEDVVTFQTLPPQ RRRDIQQTLTQNMERIFSLLNLTQENVN KYQQVKTDTSQESKAQANCRVGVAALN TLAGYIDWVSMASHITAENCKLLEILCLLL NEQELQLGAAECLLIAVSRKGKLEDRKP LMVLFGDVAMHYILSAAQTADGGGLVE K
2821	10872	A	376	129	365	NYYYTHLYANIFDTLEERGKFL/DKQNL SK LEQTGKAQGFYDLLKKLN**L*SLTKK ASGRGPLLGNSFQF*RKKMPTL
2822	10873	A	3760	1	168	PLKRSDGCNDGRPTRPPTRPDTTVFTSNL KQTRMVHLTPVERVCRYCPVGQKPG
2823	10874	A	3765	1	234	
2824	10875	A	3766	1	1697	LRAAGGGRTMPSFDEALQRVGEFGRFQ RRVFLLLCLTGVTFAFLFVGUVFLGTQP DHYWCRGPSAAALAERCWSPREEWN RTAPASRGPEPPERRGRCQRYLLEAAND SASATSALSCADPLAAFPNRSAFLVPCRG GWRYAQAHSSTIVSEFDLVCVNAWMLDL TQAILNLGFLTGAFTLGYAADRYGRIVIY LLSCLGVGVGTGVVAFAPNFPVFVIFRFL QGVFFSLTWMTCYVIVTEIVGSKQRRIV GIVIQMFFTLGHILPGIAYFIPNWQGIQLA ITLPSFLFLYYWEVPESPRWLITRKKGD KALQILRRIKCNKYLSSNYSEITVTDE EASNPSFLDLVRTPQMRKCTLILMFAWF TSAVVYQGLVMRLGHGGNLYIDFFISGV VELPGALLILTIERLGRRLPFAASNIVAG VACLVTAFLEPIAWLRTTVATLGRLGIT MAFEIVYLVNSELPTTLRNFGVSLCSSL CDFGGIAPFLFRLAADVLELPLIIFGILA SICGGLVMLLPETKGIALPETVDDVEKLG SPHSCKCGRNKKTPVSRSHL
2825	10876	A	3767	103	370	IGVPGAISSSASGRLAVALGTILSFSFSISE FFRFWLRVVGQVDLSGDVVYCTYPLFIF LSALSLEDYSPETKVFK*LKTKHDSHMT GN

2826	10877	A	3768	97	1639	CPLQWICAINNISRQIYLTNDNEAVAIKL NQ TALQAGTPITSFGKKQESSCPSQNLK NSEMENENDKIVPKATASLPEAEELIAPG TPIQFDIVLPATEFLDQNRGSRRTNPFGE TEDESFEAEDQQQEVNEILSGKCCLPD SLLQQMFI VRFLGSM AVKTDSTTEVIYE AMRQVLAARAIHNIFRMTESHLMVTSQS LRAPGGRGGCGRSFSRLKCSCLPALKRA AGLPAQRLSSAKGQTASSSESLTVVPD GETPPSRNRQTPHTGEFQLASGHQHQR KVDKSTKMRKKQHRKAENSKNQNASPP PKDHNSLPAREQNW TENEFEEFTERGFR SDRENGTKLENTLQDIIQENFHNLARQA NIQIQEIQRTPQRYSSRRATPRHIIIRFTKV EMKEKMLRAAREKGQVVTHKGKSIRLT ADLSAETLQVRREWGPIFNNLKEKNFQP RISYPAKLSFISKGEIKFFTDKQMLKD VV TTRPALKELLKEALNMERKNQYQPLQK HTKM
2827	10878	A	3769	159	277	
2828	10879	A	377	67	224	
2829	10880	A	3770	1	474	HPPPTMALKRIHKE LNDLARDPPAQCSA GPVGDDMFHWQA/TIMGPNDGPL/YQG GVFFLTIPFPQQITPFPKPKVAFTTRIYHP NINHNGSICLDILRSQWSPALTISKVLLS ICSLLCDPNPDDPLVPEIARIYKT DREKY NRIAR/EWTQKYAM
2830	10881	A	3771	153	291	
2831	10882	A	3772	1	336	
2832	10883	A	3773	1	2336	MVRSWLTATSASQVQAILPQPPKTQLN FTVAIDFTASNGETRMSEKVGGNPLQPT SLHYMSPYQLSAYAMALKAVGEIIQDY DSDKLFPAYGFGAKLPPEGRIHQFPLNN NDEDPNCAGIEGVLESYFQSLRTVQLYG PTYFAPVINQVASNSWSSVTLGTDSEPA VEVPQYVGIRLLVEGFTIKKPMAMCHRR MGVRPAVPLL TQRGS GEGKDSGTPTHSL HTKAQLPSPHVLRHQGVLRQHSKL V GTKALSTTGKALRTLPTAKVFISLP*GPW HRR*AGRDSCSAGR*AAEDSLRHFHSSV SHHWKP*SQWLL*SSAVSWEA EAGELLE PGRRLQ
2833	10884	A	3774	1015	1292	AGRAWWRMPYNPQHFRPRRDHLRS GVQDQPGQHGETPASLLKGPKIGWAWW RTPVIPATWEAEPAGELLEPRRQRLQVSQ DRTTALQPGQE
2834	10885	A	3775	183	511	SQHFGRLRWADCLRSIQDQPGQHGETL SLLKIQLARSGGTCLQSLLARLRQEN HFSLGEGGCSEPRSGHCTPAWARV/GHS VLKTNEQKNSSTLHTKSHWIFQFPGH
2835	10886	A	3779	60	361	
2836	10887	A	378	436	829	NLREFPWAPCVLHYKFSSKLN LWIPVT L*GGSHILPSATLKKQIYGEVKKLAADC DLQITNAQTKEEYTDNALIPKNSSVIVR RPIGGVKSTSKTYVISRTEPAMATTKAV CKNTISHFFYTL LPL
2837	10888	A	3780	2	616	ERTEKSDRAVRSGAPHADGSREAVFCAC IWRWRVGGGRSCCTGRPSWGASSAVT RGPHVTRSCRATQPSLQSSLASGYQLPA ALSSARSFPGPKSGAGSATAKCSSGAP RGENPEEKETARIGPGKTKKMEQPYAR MEEEDR/HLWGGGEGPPSPARKIERGKA RPTCPLNFRMGYPNRPESMDGDGWKM EMDMGKYSMGR

2838	10889	A	3781	2	888	RQRQRPRAGPAGRTGGQKAPGARVPPG PAMEGASFGAGRAGAALDPVSFARRPQ TLLRVASWVFSIAVFGPIVNEGYNVNTDS GPELRVFNAGACRFGVALGLGAFL ACAAFLLLDVRFQQISSVRDRRAVLLD LGFSGLWSFLWVFGCFLTNQWQRTAP GPFITTHAGDAARAAIAFNFFSILSWVAL TVKALQRFRLGTDMSLFATEQLSTGASQ AYPGYPVGSVEGTETYQSPPTETLDTS PKGYQVPAYYRLAGTDQGSKATPPTQA PGSPGPPLGPSSSVPRTE
2839	10890	A	3782	1	1944	MADRTKELESIPDSNRGSGIMGNSRDFA DFGTTIKQDFRLLGQTSVDRLLQLSQGQ AVKGNQLLPVSLVKRKTTLAPNTQTASP RALADSLMQLARQVSRLESGQDFADFG TTIKQDFRLLGQTSVDRLLQLSQGQAVK GNQLLPVSLVKRKTTLAPNTQTASPRAL ADSLMQLARQVSRLESGQWTLVPNWNT TQPLSGDILLIYKGFRCFRNHHQTGFSLA GANQRGPLAATLSGPGGEGQSAVARLT GEKKN
2840	10891	A	3783	1	578	MGVEGRYPVSLSSDLEWRPDRCDASE VQRDPRAGSAPLAEDVQVDPKDSHSSS ERFLEQSHSSMERAFAEADYGRSCDYKVG SPSYLDKLLWRDNKPHHYSEPKLILDLS HWKQAAGAPPTATGLADTGAREDEPAS LFLENPQGVKSTQGAQNTPARPTTPSA AWLPRPPPPGPTLADSCSVTKWGQV
2841	10892	A	3784	861	2636	GARGRPLAETWPFLTAPVLPGLQITEPT MAEKGDCIASVYGYDLGGFRVDFQPLG FGVNGLVLSAVDSRACRKVAVKKIALS DARSMKHALREIKIIRRLDHDNIVKVYE VLGPKGTDLQGELFKFSVAYIVQEYMET DLARLLEQGTAEHAKLFMYQLLRGL KYIHSANVLHRDLKPANIFISTEDLVKI GDFGLAKESLNQVHYSVHKGYLSEGLVT KWYRSPRLLSPNNYTKAIDMWAAGCIL AEMLTGRMLFAGAHELEQMQLILETIPVI REEDKDELLRVMPSFVSSTWEVKRPLRK LLPEVNSEIDFLEKILTFNPMDRLETAEM GLQHPYMSPYSCPEDEPTSQHPFRIEDEI DDIVLMAANQSQLSNWDTCSSRYPVSL SSDLEWRPDRCDASEVQRDPRAGSAPL AENVQKDPKDSHSSSERFLEQSHSSME RAFEADYGRSCDYKVGSPSYLDKLLWR DNKPHHYSEPKLILDLSHWKQAAGAPPT ATGLADTGAREDEPASLFLEIAQWVKS TQGAQSTPTRPPTPSAACLRPPPPGP GRRRQPPVRPGRVHLRPEALHQARG PAGQ
2842	10893	A	3788	1	167	
2843	10894	A	3789	1	1685	NTIHDTEIYLSRCWVCCAVSAIARARA ALPNIVGEKGGAGSARSSPRRAAECA QIPQPRRSPAVQAEPARRSRFPFTLQGA FSSAIIAGIGGTSAAYYLRQKFGKDVKI DLFEREEVGGRLATMMVQGGQEYEAAGGS VIHPLNLHMKRFVKDLGLSAVQASGGL LGIYNGETLVFEESNWFIIINVILVWRY GFQSLRMHMWVEDVVDKFMRIYRYQS HDYAFSSVEKLLHALGGDDFLGMLNRT LLETALQKPGCSEKLLNEMIGPVMRVNY GQSTDINAFVAGAGSLSCSDSGLWAVEGG NKLVCSGLLQASKSNLISGSVMYIEEKT KTKYTGNTKMYEVVYQIGTETRSDFY DIVLVATPLNRKMSNITFLNFDPPNEEF HQYYQHIVTTLVKGELNTSIFSSRPIDKF GLNTVLTDDNSDLFINSIGIVPSVREKEDP EPSTDGTYYWKIFSQETLTKAQILKLFLS YDYAVKKPWLAYPHYK/PPPEKCPLLSF CUDPIVVIINGICCAASAIMEMSAIAAII

						SHDRLYY\NGIECAASA\MEMSAIAAH NAALLAYHRWNGHTDMIDQDGLYEKL KTEL
2844	10895	A	379	74	378	GCTKDSNIYFIKEHFQSVNNHIKRLISFL IRVM*LKPQQVTINTPIRMAKI*KAENSK CWQECGAAVTLMH***V*LPLKSWHFL KLSTCLFYDLAIP
2845	10896	A	3790	52	264	QSFAPGPPPFIPPPWGGRAGGFGPGMG/ PPPGPPGGTSSSSKIPKFGRRGGPPFPPL PKRVRPGDFFYP
2846	10897	A	3791	627	1524	SHGENCKCPSTGDYRKLIYHLKGCQGLR NKGSSPFTSIVSAAKVCGAASESPSVKSL CLLVADQDFSFKAGQWVDFIPGVSVVG GFSICSSPRLEQERVIELAVKYTNHPPA LWVHNTCTLDCEVAVRVGGEFFDQ ADASRNVLVIAGGVGINPLLSILRHAAD LLREQANKRNGYEIGTIKTILQCKKYP LLFKKNILDLVNEFPEKIACSLHVTCTDY TNPMRNSKPYTEGRITEKEIRDHISKETL FYICGPPMTDFFSKQLENNHVPKEHICF EEVVVGGRQQRQK
2847	10898	A	3792	331	756	WKRSLKYLWLLRSHNSHPSSSLTPSLSPS AEAEEDGDLQCLCVKTTTSQVRPRHITSL EVIKAGPHCPTAQL/IVSPRTASVSAPAPC LLCPSLPLMPFANPRTESHVSSLPARA TLKNGRKICLDLQALLYKKIIEHLES
2848	10899	A	3793	3	402	HEETQPEFPIALSTEILLEALPQHELRSRV LR/AQRPGLLFLGLLLPLVVAFRRAEA EEDGDLQCLCVKTTTSQVRPRHIHQGR* SKAGPHCPTCPT**PR*KNGRKIWLGTW QAPLLQGK*FKETFWESLAN
2849	10900	A	3794	2	146	
2850	10901	A	3795	3	1034	SEFPARTPRRCPRSPGPAMGLTVSALFS RIFGKKQMPILMVGLDAAGK/TSHILYKL KLGEIVTTIPTIGFNVETVEYKNICFTVW DVGGQDKIRPLWRHYFQNTQGLIFVVD SNDWRERVQESADVELQKMLQEDELDA VLLVFSNKQDMPNAMPVSELTDKLG QHLRSRTWYVQAHLPTQGTGFVTMV LDWLSHELKALNQPWGRPLDARKSRC VQSPTMSQNSPTPRGKCPFPPTFSLPHSP QASASAPCSCLHVLSVVGAVEPLLSGHR GVPLFLPAGTYGRGFAGPRPPSSRGGAGI WVSFFFFCFGCTLGGQVGRGKVRAFGW CYNVALDLE
2851	10902	A	3796	1536	1838	GLPQQLKRIQQVLIKCLAFYFLFFFF LRWSLALLPILECSGVISAHCNLRPLGLG DSLASASRVAGM/TTGTCHHAQLIFCIFS RDGVSVLARTVWIS

2852	10903	A	3797	2	740	GRVQGSTSKVPKEGLLSLHLLCSTAHYQ KTAEMKSIYFVAGLFVMLVQGSWQORSL QDTEEKSRSFSASQVADPLSDPDQMNED KRHSQGTFTSDYSKYLDSSRAQDFLQ WLMNTKRNRRNNIAKRHDEFERHAEGTF TSDVSSYLEGQAAKEFIAWLVKGRGRR DFPGEGRPLLKNLAGRHADGSFSDENM TILDNLPAIDFINWLIRTKINTDREITYIT YSEIIFTNITLLAHVGCLEMFKSW
2853	10904	C	3798	204	272	
2854	10905	A	3799	1	350	
2855	10906	A	38	3	203	HASDKMADKEKKKKESILDLSKYIDKTI RVKFQGGREGEGLPLSVPL*KFQINPA TEMMRTHAEA
2856	10907	B	380	1	483	MGQARWLTPVIPALWEAEAGSGRGP AGLLEFARGPLQTLFAWVSAVAEQRI FVNRECCCLIVPLEVLSQRSTRPCEVSVC PYWENAFQLGCSGTVTVGSTTVTLAECL KWLTTFLVLSIGLAAMVDLNTGDVV WLLNVAEWNFSVNIPNDSLS*
2857	10908	A	3800	1	397	QRPI*PTKPIGQVRVSKGHQPTRHDFQF LAAHETISRLVGFSAGQVQYLDLIKKVDP SKLFNEERLIDKTKVTYLKWLPESESLFL ASHASGHLLYLVNVSHPCASAPPQYSLLK QGEFVSVAAYNDLFL
2858	10909	A	3801	1	2066	MAAGGAEGSGPGAAMGDCAEIKSQFR TREGFYKLLPGDGAARRSGPASAQTPVP PQPPQPPGPASASGPGAAGPASSPPAG PGPGPALPAVRLSLVRLGEPDSAGAGEP PATPAGLGSGGDRVCFNLGRELYFYPGC CRRGSQRWHTPLTPFLPPLKSIDLNKPID KRIYKGTQPTCHDFNQFTAATETISLLVG FSAGQVQYLDLIKKDTSKLFNEERLIDKT KVTYLKWLPESESLFLASHASGHLLYLVN VSHPCASAPPQYSLLKQVWGFYFAAK SKAPRNPLAKWAVGEGPLNEFAFSPDGR HLACVSQDGLRVFHFDSMLLRGLMKS YFGGLLCVCWSPDGRYVVTGGEDDLVT VWSFTEGRVVARHGHSWVNAVAFD SLYTTRAEEAATAAGADGERSGEEEEEE PEAAGTGSAGGAPLSPLPKAGSITYRFGS AGQDTQFCLWDLTEDVLYPHPLARTRT LPGTPTGTPPAASSSRGEGPGPLPRSL RSNSLPHPAGGGKAGGPGVAAEPGTPFS IGRFATLTLQERRDRGAKEHKRYHSLG NISRGSGSGSGGEGKPSGPVPRSLDPA KVLGTALCPRIHEVPLLEPLVCKKIAQER LTVLLFLEDCHTACQEGLECTWPRPGKA FTDEETEAQTGEGSWPRSPSKSVVEGISS QPGNSPSGTVV
2859	10910	A	3802	1	1155	
2860	10911	A	3803	285	1444	LLISPGPRLGAPSFPMAGHLASDFAFSPPP GGGGDGPGGPEPGWVDPRTWLSFQRP GGPGIGPGVPGSEVWGIPPCPPPYEFC GGMAYCGPQVGVGLVPQGGLETSQPEG EAGVGVESNSDASPEPCTVTPGAIVKL EKEKLEQNPEKISQDIKALQKELEQFAKL ALKQKRITLGYTQADVGLTLGVLFQKVFS QTTICRFEALQLSFKNMCKLRPLLQKWV EEADNNENLQEICKAETLVQARKKRRTS IENRVRGNLNLFQCPETPHWQQIASHIA QQLGLKKHVVRVVRVWFCNRRQKKGK RSSSDFAIQREDFAAGSPFSGGPVSLFP LPPGPHFGTPGYGSPHFTAILYSSVFPPE GEAFPPVSVTILGSPMHSN
2861	10912	A	3806	3	225	GQTSQHHVALRTTQHHWALGOHRVAL HTVEYYLALKRKEMDTGCKWMELEYI VLSGISQSQEDMHCMIPFVSGP

2862	10913	A	3807	874	1444	CQARPMPLRAFNPVSSFRWARGMTTIVA ALMTVFFIMQLVGQVPAALWVIFGEDRF RWSATMIGLSLALFGILHALAQAFVTGP ATKRFGEKQAIHAGMGPNALGYVLLAFA TRGWMAFPIMILLASGGIGMPALQAMW LAE*ITDTRANVKRLLQNVCDLSNNMN GLRFPFCVKSCGTPSVLTKRWH
2863	10914	B	3808	1	1917	MIGLSLAVFGILHALAQAFVTGPATKRF GEKQAIHAGGRRAGRLAGVPTRGWM AFPIMILLASGASGCRVAGHAVQAALRA QGLLKEAEHVESQSAETVLTPEQCQLLG YLDKGKRKRKEKAGSLQWAYMAIARL GGFMDSKRTGASWGALCAGAAVLVFK TDLGALNELQDEAARLSWLATTGVPC AAVL DVVTEAGRDWLLGEVPGQDLS SHLAPAEKVSIMADAMRRLHTLDPATCP FDHQAKHRIERARTRMEAGLKDLMRD QDLIKRQDEDRSHDEQDDARRSPAAWW RAYSAIAATTDSNGRPVLFVKTDLSGAL NELQDEAARLSWLATTGVPCA AVL DVV TEAGRDWLLGEVPGQDLS SHLAPAEK VSIMADAMRRLHTLDPATCPF DHQAKH RIERARTRMEAGLVDQDDLDEEHQGLA PAELFARLKARMPDGEDLVVTHGDAAC RISWWKMAAFLDSSTVAGWDIALATRDI AEELGGEWADRFLVLYVLLSGTLGFEM TDQATPNLPSRDFDSTA AFYERLGF GIVF RDAGWMILQRGDLMLEFFAHPGLDPLA SWFSCCLRLDDLAEFYRQCKSVGIQETS SGYPRIHAPELQEWGGTMAALVRIFVKE PYFCGVT*
2864	10915	A	3809	1057	1905	
2865	10916	B	381	119	955	MVSISRPRDPPASASQSAGITGPALGAEG ERAFHRHRVMIVTEGAPGGLSSGHLRDA MDSEAGTDDGCASHVRVVRDLKPSNI LYVDESGNPECLRICDFGFAKQLRAENG LLMTPCYTANFVAPEVLKRQGYDEGCDI WSLGILLYTMLAGYTPFANGPSDTPPEIL TRIGSGKFTLSGGNWNVTSETAKDLVSK MLHVDPHQRLTAKQVLQHPWVTQKDK LPQSQLSHQDLQLVKGAMAATYSALNS SKPTPOLKPIESSILAQRRVRKLPSTTL*
2866	10917	A	3810	1	2928	
2867	10918	A	3811	630	1159	GAPWGQVPAALWVIFGEDRFRWSATMI GLSLAVFGILHALAQAFVTGPATKRFGE KQAIHAGMAADALGYVLLAFATRGWMA FPIMILLASGGIGMPALQAMLSRQVDDD HQQQLQGLAALTSLSIIGPLIVTAIYAA SASTWNGLAWIVGAALYLVCLPALRRG AWSRATST
2868	10919	A	3812	1	3525	
2869	10920	A	3813	1	1606	MLMKAHKGVLGEQEKVPRRLMKVLKG VPGEQEKVLWEAREEGVSSRW TGSPMG CEQRVWMGDEQAMEPLGLADGKLWRT FMGAADAERKEGRGMKVAPAPAVVKK QEAKKVVNPLFEKRPKNFGVGQDIQPKR DLTRFVKWPRYIKLQHQRALYKRLKVP PAINQFTQALDRQTATQLLELAHKYRPE TKQEKQRLLAQAEKTAGKGDISTKRL PVLQAGVNWEDKSALAKLVEGIRTNYN ERYNEIHHHWGGNVLGPESVARIKLLK ADGSLRLDFTVCKKAWIVSHPVSRKLP QQRQNRKRQEVQAWGSGPCLSLVV GSEPATGGSSCSETSGFGKCKVKETNP QPM AATPTLEQGEA VA AHA EIPPACSHG QVPAALWVIFGEDRFRWSATMIGLSLAV FGILHALAQAFVTGPATKRFGEKQAIHAG MAADALGYVLLAFATRGWMAFPIMILL ASGGIGMPALQAMLSRQLTSIIGPLIVTA

						IYAASASTWNGLA WIVGAALYL VCLPAL RRGAWSRATST
2870	10921	A	3814	1701	1904	
2871	10922	A	3815	1	427	MAKMKNQIIPSVGEKLEQQKPSYDARAF VTGPATKRFGEKQAIAGMATDALGYVL LAFATRGWMAFPIMILLASGGIGMPALQ AMLSRQLTSIIGPLIVTAIYAASASTWNG LA WIVGAALYL VCLPALRRGAWSRATS T
2872	10923	A	3816	1	1629	
2873	10924	A	3817	1	1013	MMGLRNSYDVKERLKHQVRGGKAPKA VNSGKLLPFPRLKELAGVEGMGNCYL RTQPGTRMQWSPMKLSVELRAGQSRLL RESKGKEIPEPRCAA VGGKEPEAKPPKV PRPMLRAFNPVSSFRWARGMTIVAAL MTVFFIMQLVGQVPAALWVIFGEDRFR WSATMIGLSLAVFGILHALAQAFVTGPA TKRFGEKQAIAGMAADALGYVLLAFAT RGWMAFPIMILLASGGIGMPALQAMLSR QVDDDHQGGQLQGSLAALTSLTSIIGPLIV TAIYAASASTWNGLA WIVGAALYL VCLPAL REHPLSFHRYHYPHEQKSPLHGGISDQT GKNRP
2874	10925	A	3818	1	2634	
2875	10926	A	3819	1328	2536	
2876	10927	A	382	1	662	LGSCVTQTGVQWCGHSSLRPQTQAQAI LLPCLSNCWYDKHEPLHLAYVTQFCFLS FFFGGGGWSLALSPMLECGGVILAQCKL RLLGFTPFSCSLSPSSWDHRHPPCLANF LNF/SVETGFHFLAQDGLDLLTS/S/PPAS A/FPKCWDYRRDHRAPQM*CNSDVNSL MLPQMPQVK/AHQSPIGCPRFRHTCRLG CPQTTCTSHQLAANLEVPTMPSSSITH
2877	10928	A	3820	1	1594	MSAAPCSTVPSPIDHPRAEECGHTARDW QVAPPAAQSHDDDEEEDEKEEEEEEE ELLAGSPYSPTVPCFPLECPCLENGSRQ KQDKHTPGFKHKFQHAFSSFLATITHS FWVAEHSRLLEGKQGAQISPHLQVGPGL VWQGYLWQNREAGSSRDSHLNMPCGM AAGHSHSGTLFSDQGLWEQCQLLKSTSV FARCHPLVDPEPFVALCEKTLCECAGGL ECACPALLEYARTCAQEGMVLYGWDH SACSPVCPAGMEYRQCVCSPCARTCQSLH INEMCQERCVDGCSCPEGQLLDEGLCVE STECPCVHSGKRYPPGTSLSRDCNTCICR NSQWICSNEECPDREGHNSRQREVALSA QVGCNHVTPALVSGQVPAALWVIFGED RFRWSATMIGLSLAVFGILHALAQAFVT GPATKRFGEKQAIAGMAADALGYVLLA FATRGWMAFPIMILLASGGIGMPALQAM LSRQLTSIIGPLIVTAIYAASASTWNGLA WIVGAALYL VCLPALRRGAWSRATST

2878	10929	A	3821	3	995	TSPTATGPALVCYRASLVALREEDTRSQ EYVPFRGNRDFAHVKKMGGLGLAMD VPEELGGAGLDYLAYAIAMEEISRGAS TGVIMSVNNSLYLGPILKFGSKEQKQAW VTPFTSGDKIGCFALSGTRAFNPVSSFRW ARGMTIVAALMTVFFIMQLVGQVPAAL WVIFGEDRFRWSATMIGLSLAVFGILHA LAQAFVTGPATKRFGEKQAIAGMAADA LGYVLLAFATRGMWMAFPIMILLASGGIG MPALQAMLSRQVDDDHQGGQLQGSAA LTSLTSIIGPLIVTAIYAASASTWNGLAWI VGAALYLVLCPALRRGAWSRATST
2879	10930	A	3822	1	619	MPLRAFNPVSSFRWARGMTIVAALMTV FFIMQLVGQVPAALWVIFGEDRFRWSAT MIGLSLAVFGILHALAQAFVTGPATKRF GEKQAIAGMAADALGYVLLAFATRGMW MAFPIMILLASGGIGMPALQAMLSRQVD DDHQGGQLQGSAAALTSLSIIGPLIVTAIY AASASTWNGLAWIVGAALYLVLCPALRR GAWSRATST
2880	10931	A	3823	1	565	MPLRAFNPVSSFRWARGMTIVAALMTV FFIMQLVGQVPAALWVIFGEDRFRWSAT MIGLSLAVFGILHALAQAFVTGPATKRF GEKQAIAGMAADALGYVLLAFATRGMW MAFPIMILLASGGIGMPALQAMLSRQVLT SIIGPLIVTAIYAASASTWNGLAWIVGAA LYLVCLPALRRGAWSRATST
2881	10932	A	3824	1	934	MTMWVLHCAFTYFVSAWSKHGYAHAV TAKILYAGRIVAGITGATGAVAGAYADI TDGEDRARHFGLMSACFGVGMVAGPV AGGLLGAISLHAPFLAAAVLNGLNLLG CFLMQESHKGERRPMPLRAFNPVSSFRW ARGMTIVAALMTVFFIMQLVGQVPAAL WVIFGEDRFRWSATMIGLSLAVFGILHA LAQAFVTGPATKRFGEKQAIAGMAADA LGYVLLAFATRGMWMAFPIMILLASGGIG MPALQAMLSRQVLTSLIIGPLIVTAIYAASA STWNGLAWIVGAALYLVLCPALRRGAW SRATST
2882	10933	A	3825	657	7035	LRTCWHSDCQNTAADHSAQGSRRHRK PCNRCAPGSQNWAVPLLPDISCRTGCAV RKDRLLIAGPIQ*N/LKTAVVGRQPYLTKL CLMLGCLGRMRWRCSTGWLRLRTSSVQ CS*RISNRMSCTGSMLTTWL*MKLQQVN GLGQGLIQSAGKDCDVQGLEHDMEEIN ARWNTLNKKVAQRIQLQEALLHCGKF QDALEPLLSWLADTEELIANQKPPSAEY KVVKAQIQEQKLLQRLDDRKATVDM LQAEGRRI

2883	10934	A	3826	140	2298	LFPRLLSFLTPPHCSFSCFVICSRTRLIK GSSLITG/CTQFRLSETKEITNPYAMRLYE SLCQYRKPDGSGIVSLKIDWIERYQLPQ SYQRMDFLPLPAGALSLISKVTDNRAN DSMEQGAETSQGALGTLANVVTSLANL SESLNNGDTSEIQPEDQSASEITRAFDTL AKALNTDSSSSPSLADGIDTSGGSIHVI SRDQSTPIIEVEGPLLSDTHVTFKSIREDR NGRSQKTVHTEGDMNMNIKKIVKQATV LTFTTALLAGGATQAFKENNQKAYKE TYGVSHITRHDMLQIPKQQQNEKYQVPQ FDQSTIKNIESAKGLDVWDSWPLQNADG TVAEYNGYHVVFALAGSPKDADDTSIY MFYQKVGDNIDSWSKNAGRKFDSKDF DANDPILKDQTQEWSGSATFTSDGKIRL FYTDYSGKHYGKQSLTTAQVNVSKSDD TLKINGVEDHKTIFDGDGKTYQNVQQFI DEGNYTSGDNHITLDRPHYVEDKGHKYL VFEANTGTENGYQGEESLFNKAYYGGG TNFRKESQKLQQSACKRDAELANGAL GIELNNDYTLKKVMKPLITSNTVTDEIE RANVFKMNGKWYLFDSRSGSKMTIDGI NSNDIYMLGYVSNSLTGPYKPLNKTGLV LQMGLDPNDVTFTYSHFAVPQAKGNV VITSYMTNRGFFEDKKAATFAPSFLMNIK GNKTSVVKNSILEQQQLTVN
2884	10935	A	3827	1	2604	
2885	10936	C	3828	1	2076	MNMNIKKIVKQATVLTFTTALLAGGAT QAFKENNQKAYKETYGVSHITRHDML QIPKQQQNEKYQVPQFDQSTIKNIESAKG LDVWDSWPLQNADGTVAEYNGYHVVF ALAGSPKDADDTSIYMFYQKVGDNIDS WKNAGRKFDSKDFDANDPILKDQTQE WSGSATFTSDGKIRLFYTDYSGKHYGKQ SLTTAQSIREDRNGRSQKTVHTERDMIM NIKKIVKQATVLTFTTALLAGGATHAFA KENNQKAYKETYGVSHITRHDMLQIPKQ QQNEKYQVPQFDQSTIKNIESAKGLDVW DSWPLQNADGTVAEYNGYHVVFALAGS PKDADDTSIYMFYQKVGDNIDSWSKNA GRVFKDSKDFDANDPILKDQTQEWSGS ATFTSDGKIRLFYTDYSGKHYGKQSLTT AQVNVSKSDDTLKINGVEDHKTIFDGDG KTYQNVQQFIDEGNYTSGDNHITLDRPH YVEDKGHKYLVFEANTGTENGYQGEES LFNKAYYGGGTNFRKESQKLQQSACK RDAELANGALGIELNNDYTLKKVMKPL ITSNTVTDEIERANVFKMNGKWYLFDS RSGSKMTIDGINSNDIYMLGYVSNSLTGP YKPLNKTGLVLQMGLDPNDVTFTYSHF AVPQAKGNVITSYMTNRGFFEDKKA TFAPSFLMNIKGNKTSVVKNSILEQQQLT VN*
2886	10937	A	3829	1	3603	
2887	10938	A	383	110	784	AAAAASKVLM*TGGAAPQEOP*TGGVQ A*APGSVA/AEGASVEGPGFGDTAPAHQ GLSPTRSHGQGGAGRASASRDPPGGTG GWGFLKCGPGALCPERGKDGASASVPR GPYAEAEKGGWALRGLGGVAAPGPPSR AGQAPSGLHTGPNARPAPWPIPGQGGL RRDQAG*VSSWTGSTEPGAHTAHRAPG HGGKGGSPQPPHQPQGPQIPTTHTRMHS CRITAA

2888	10939	A	3830	2455	3151	DRRCPIFCLLPFGIRFILLFGSSLRGPFIIL FFFFLIFFPPFIFLLSILGSFFFLSPVLLLL HHFFLSLFPACLLLHLLLLLQVLGAQLG RCLHA/SSPTWCRGRGR/VLAGSRGPGAE TEGPWTAEGGRGRNLARWRRRRRQ RRPLGKLGLWKRQRRAAGWGGGSGA ETRAAAVRRAGGRAVQAVAGALGRG SSIPGSPPPHQQAADQPCRPREGNPLIRR RLP
2889	10940	A	3831	1	2376	MKLMETLNQCINAGHEMTKAIAlAQFND DSPEARKITRRWRIGEADLVGVSSQAIR DAEKAGRLPHPDMEIRGRVEQRVGYTIE QINHMRDVFGTRLRRAEDVFPVIGVAA HKGGVYKTSVSVHLAQDLALKGLRVLL VEGNDPQGTASMYHGWVVDLHIHAEDT LLPFYLGEKDDVTYAIKPTCWPGDIIPS CLALHRIETELMGKFDEGKLTPDPLML RLAIETVAHDYD*FVQLYNQHVQAQPV/ GISISGCSRPAFSAALIA*EETPTKSAASP ILQRRVIFLASGLSSSLNCAMAI AFVIS
2890	10941	A	3832	1289	3109	ETPYVSLYAFWLFSAKA*VAPPSGFSPT VVSSDSWLGSLVPYTLIART/PELIFVVRQ QVLDVERGAAACG*FLPRLVG*VPDLDA VGLYSTAPII*GAIPGQGO*GLRMSEAQG VPAGGSGLSTTVRLTWACLLPSLSTSSV *QPQCSWRAARMVSLLPFSLSTFMCSL SWICFRNFIQVQVMG*VPVTL PNSSTDSP ARTFWSSGNWMI*GGIAAFGGVLGAGFF FTVAS/PLSS*HGRKRALGPPGFHLWGLG VLTGWSIIHGDLAGALRLASVILGYTLV* ASVLRQCLLDGDGQSEPSWERMNNLV VLMVFPFSVQMMVAGGSEDTHWSSSF LPSAT*TSFCLKAGAVPWLSDFLSLV VPAWPLLQFTSFLTSFLSSSLADFRFSSG LALPMGFRVSAGLALPIGFRVSAGLALP TGFKGPEGCALLRGLELSTALAFRVSAL LLPFSAGNFFLPSTERKSGVAGFGGGTF SGTGVLVFPFLARTEKSTCWGLCTFLS SSDTVFGFTCRCLARKSICSAGISFRSSS DRVFLVTFPRRSRKSSCSTSCWRIASSV CCLVSTRLFSTPTSPSSSSSQPCLAGQ PGLRDP
2891	10942	A	3833	1	2968	MTIVAALMTVFFIMQLVGQVPAALWWIF GEDRFRWSATMIGLSLAVFGILHALAQA FVTGPATKRFGEKQAIAGMAADALGYV LLAFATRGWMAFPIMILLASGGIGMPAL QAMLSRQPNFDHWTADRHGDLCLRGH MERVGMDCRRRPICLPPRVASRCMEPG HLDMNCSRRLHANGFTTPRIGANQFLRR TVNAQTNPWQNIASIAISSRTRISGSV GSWPRSGNAEVSALHHYVPDLHRRMLL ATL
2892	10943	A	3834	1	563	MPLRAFNPVSSFRWARGMTIVAALMTV FFIMQLVGQVPAALWVIFGEDRFRWSAT MIGLSLAVFGILHALAQAQFVTGPATKRF GEKQAIAGMAADALGYVLLAFATRGW MAFPIMILLASGGIGMPALQAMLSRQLT SIIGPLIVTAIYAASASTWNGLAWIVGAA LYLVCLPALRRGAWSRATST
2893	10944	A	3835	850	1280	
2894	10945	A	3836	3	3971	VCTGSSTRHIVTFDGGQNFKLTGSCSYVLF QNKEQDLEVLHNGACSPGARQGCMSI EVKHSALVELHSDMEAFRLVHGHYPYS ITTACFLVKLCKVKLCFLVKLFFILEELPT NIKVTVNGRLVSPYVGGNMEVNVYGA IMHEVRFNHLGHIFTFTPQNNFQLQLSP KTFASKTYGLCCIGDENGANDFMLRDG TVTTDWKTLVQEWTVQRPGQTCQPILEE QCLVPDSSHQVLLLPLFAECHKVLAPA

					T
2895	10946	A	3837	1838	4062
					KRHKKPFKKSTNPGAGFFEKINKIDRLLA RLIKKKREKNQIDAINKNDKGDITTDPTM QTTVREYYKHL YVNKPENLEEMDKFLD TYTLPRLNQEELESLNKPITGSEIEAINSL PTKKSPPGDGFTAIFYQRYKEELLPFLK LFQSIEKEGILPNSFYEASILPKPGRDTT KKENFRPISLMNIDANILNNILANQIQQHI KKLIHHDEVGFIPGMQGWFNIRKSINLIP HVNRTKDKNHMVISVDAEKAFFDKIQQH FMLKTLNKL GIDGTYLKIRPIFDKPTADI ILNRQKLEALPLKTGTRQRCSLPFLFNI VLEVLARAIRQEKEIKGIQLGKEEVKLSL FADDMIVYLENPIVSAQNLLKLIGNFSKV SEYTINVQKSQSFLYTNNRQTESQIMSEL PFTIASKRIKYLGIQLTREVKDFKENYK PLLDEIKENTNKWKNIPWSWVGRIDIVK MAILPKQMPDVNVSWDGEQPKQLPFIDI SVAVATDKGLLTPIIKDAAAKGQELADS VRSNIVLQCQARPMPLRAFNPVSSFRWA RGMTIVAALMTVFFIMQLVGQVPAALW VIFGEDRFRWSATMIGLSLAVFGILHALA QAFVTGPATKRFGEKQAIAGMAADALG YVLLAFATRGWMAFFPIMILLASGGIGMP ALQAMLSRQVDDDHQGLQGSALAALTS LTSIIGPLIVTAIYAASASTWNLAWIVG AALYLVCLPALRRGAWSRATST
2896	10947	A	3838	346	777
					GELYFQVCGQFWNRCGVVMKKMYILLF LSGEFCRCL*YSLMVVCISVGSVVISPLSF FIVSI*FFSLFFISLASSLSILLILSKNQLLD SLIF
2897	10948	A	3839	1	564
					MPLRAFNPVSSFRWARGMTIVAALMTV FFIMQLVGQVPAALWVIFGEDRFRWSAT MIGLSLAVFGILHALAQAFVTGPATKRF GEKQAIAGMAADALGYVLLAFATRGW MAFFPIMILLASGGIGMPALQAMLSRQPN FDHWTADRHGDLCLRGHEHMERVGMDC RRRPIPCLPVRVASRCMEPGHLDLNGSRR HLANGFTTPRIGANQFLRRTVNAQTNPW QNISIASAISSSRTRRISGSVGSWPRSGNA EVSA
2898	10949	A	384	244	315
					NPKGQKDREAPLSRSVFLKIKIKRAFAL LLHGRF*PSTPAASASPASKSPRGSGKAL ASALFYIVQLTK
2899	10950	A	3840	3	1049
					GSLQGCAASCARAFLRTCCARSEGLAV RGTKGVAFGENPRAAGTCSQSPFFPVAP PPGVRLWVLCPRDFTGAFLRTTLALNV RAGDEGPRRLLRAPRVPSRPSAPLAPAP ASTPARRLPPVPMQAPGRGPLGLRLMMP GRRGALREPGGCGSCLGVALALLLLLP ACCPVRAQNDTEPIVLEGKCLVCDSSP SADGAVTSSLGISVRSGSAKVAFSATRST NHEPSEMSNRMTIYIDQVFSNIGHHFDL ASSIFVAPRKGIYSFSFHVVKVYNRQTIQ VSLALNGYPVISAWAGYQDVTGEAASN GVLLLMEREDKVHLKLERGNLMGGWK YSTFSGFLVFPL
2900	10951	A	3841	1	401
					KGASSPVQVPGPVAASTEALLQEAQCSG LSWVVALPVKQEKADTQDEWTPGTAV LTSPVLVPGCPSKAVDPGLPSVKQEPDP EEDKEENKDDASKLAPEEEEITEIFSLGGP RFRDTAV*LPRSKDLKKPR

2901	10952	C	3842	108	293	MNMACLGCFVVALIILPFSNPAPPLKSN FLYSGSWEEKMHQLSTLSLPPFLTSSRSS KYS*
2902	10953	A	3843	1	1490	MIREQKIYHKYLAQRREEEKAQEKEFDR ILEEDKAKKLAEKDKELRLEKEARRQLV DEVMCTRKLQVQEKSQYVKLLAAHPT GDRIRSKVELTRYLGPACDLTLFDFKQGI LCYPAPKAHPVAVASKKRKKPSRPAKTR KRQVG PQSGEVRKEAPRDETKADTDTA PASFPAPGCCENCISFSGDGTQRQRLKT LCKDCRAQRIAFNREQRMFKQPYTNRR QNRKCGACAACLRMDCGRCDFCCDKP KFGGSNQKRQKCRWRQCLQFAMKRLLP SVWSESEDGAGSPPPYRRRKRPSSARRH HLGPTLKPTLATRTAQP DHTQAPTQKQEA GGGFVLP PPGTDLVFLREGASSPVQVPG PVAASTEALLQEAQCSGLSWVVALPQV KQEKADTQDEWTPGTAVLTSPVLVPGCP SKAVDPGLPSVKQEPDPPEEDKEENKDD SASKLAPEEEAGGAGTPV/VTSDSIYPE RQL*VSSWSYLHSCGTERYP CGSI
2903	10954	A	3844	1	1758	MAEDWLDCPALGPGWKRREVFRKSGA TCGRSDTYYSPTGDRIRSKVELTRYLG PACDLTLFDFKQGILCYPAPKAHPVAVA SKKRKKPSRPAKTRKRQVG PQSGEVRKE APRDETKADTDAPASFPAPGCCENCIS FSGDGTQRQRLKTLCKDCRAQRIAFNRE QRMFKRVGCGECAACQVTEDCGACSTC LLQLPHDVASGLFCKCERRRCLRIVERSR GCGVCRGCQTQEDCGHCPICLRP RPGL RRQWKCVQRRCLRGKHARRKGGCD SK MAARRRPGAQPLPPPPPSQSPEPTQP Y T/PPAEPQVRGLCSLPTAEWMWPLR/FC CDKPKFGGSNQKRQKCRWRQCLQFAM KRLLPSVWSESEDGAGSPPPYRRRKRPSS ARRHHLGPTLKPTLATRTAQP DHTQAPT KQEAGGGFVLP PPGTDLVFLREGASSPV QVPGPVAASTEALLQAVDPGLPSVKQEP PDPEEDKEENKDD SASKLAPEEEAGGAG TPVITEIFSLGGTRFRDTAVWLPSLQGRH SGREDGCKVWETEDTVEPTSTSWNPRG WPGTHVSLSPPPASMMWVSCRRSWCPS SQS
2904	10955	A	3845	1	1647	
2905	10956	A	3846	1	1821	MAEDWLDCPALGPGWKRREVFRKSGA TCGRSDTYYSPTGDRIRSKVELTRYLG PACDLTLFDFKQGILCYPAPKAHPVAVA SKKRKKPSRPAKTRKRQVG PQSGEVRKE APRDET KADTDAPASFPAPGCCENCIGI SFSGDGTQRQRLKTLCKDCRAQRIAFNR EQRMFKRVGCGECAACQVTEDCGACST CLLQLPHDVASGLFCKCERRRCLRIVER SRGCGVCRGFQITQED/CLGHCPICLRPP RPGLRRQWKCVQRRCLRGKHARRKGG CD SKMAARRRPGAQPLPPPPPSQSPEPT PHPRALAPSPPAEFIYYCVDEDELQPYTN RRQNRKCGACAACLRNGCGRCDFCCD KPKFGGSNQKRQKCRWRQCLQFAMKR LLPSVWSESEDGAGSPPPYRRRKRPSSAR RHHLGPTLKPTLATRTAQP DHTQAPTQKQ EAGGGFVLP PPGTDLVFLREGASSPVQV PGPVAASTEALLQEAQCSGLSWVVALPQ VKQEKADTQDEWTPGTAVLTSPVLVPG CPSKAVDPGLPSVKQEPDPPEEDKEENK DDSASKLAPEEEAGGAGTPVITEIFSLGG TRFRDTAVWLPRSKDLKKPGARKQ
2906	10957	A	3847	1	1723	

2907	10958	A	3848	1	1949	MAEDWLDCPALGPGWKRREVFRRKSGA TCGRSDTYQSPGDRIRSKVELTRYLG PACDLTLDFKQGILCYPAPKAHPVAVA SKKRKKPSRPAKTRKRQVGPQSSEVRKE APRDETKADTDAPASFPAPGCCENCIS FSGDGTQRQLKTLCKDCRAQRIAFNRE QRMFKRVGCGECAACQVTEDCGACSTC LLQLPHDVASGLFCKCERRRCLRIVERSR GCGVCRGCQTQEDCGHCPICLRPPRGL RRQWKCVQRRCLRHHLRRRRHQR QRRTPLA VAPPTGKHARRKGGCD SKMA ARRRPGAQPLPPPPPSQSEPTTEPHRAL APSPPAEFIYYCVDEDELQPYTNRRQNR KCGACAACLRMDCGRCDFCCDKPKFG GSNQKRQKCRWRQCLQFAMKRLPSV WSEEDGAGSPPPYRRRKRPSSARRHHL GPTLKPTLATRTAQP DHTQAPTKEAGG GFVLPPPGH*TLCLREGVASSPVQVGP VAASTEALLQEAQCSGLSWVALPQVK QEKADTQDEWTPGTAVLTSPVLVPGCP KAVDPGLPSVKQEPDPPEEDKEENKDD ASKLAPEEEAGGAGTPVITEIFSLGGTRF RDTAVWLPSLQGRHSGREDGCKVWETE DTVEPTSTSWNP
2908	10959	A	3849	2	1682	LCDTPPGRGGGGRGGGRGRLQEGPSF MGPRGLEWRKIPAWLPNWL LLPVASM AED\WLYCPALGPGWKRREFFRKSRTC GRLNTYYQSPGDRILSKVELTRYLGP CDLTLDFKQGILCYPSPQRPIPLGGLPG KKRKKPSRPAKTRKRQVGPQSSEVRKE APRDETKADTDAPASFPAPGCCENCIS FSGDGTQRQLKTLCKDCRAQRIAFNRE QRMFKRVGCGECAACQVTEDCGACSTC LLQLPHDVASGLFCKCERRRCLRIVERSR GCGVCRGCQTQEDCGHCPICLRPPRGL RRQWKCVQRRCLRGKHARRKGGCD SK MAARRRPGAQPLPPPPPSQSEPTTEPHR ALAPSPPAEFIYYCVDEDELKRLPSVWS ESEDGAGSPPPYRRRKRPSSARRHHLGP TLKPTLATRTAQP DHTQAPTKEAGGGF VLPPPGTDLVFLREGASSPVQVGPVAA STEALLQAVDPGLPSVKQEPDPPEEDKE ENKDDASASKLAPEEEAGGAGTPVITEIF LGGTRFRD TAVWLPRSKDLKPGARKQ
2909	10960	A	385	933	1511	QVYRPSQTPHLALSPERVAPGRLAGGRL APEARAPRGSP/LPPHRVSEKTIRVMVFH PGARRAGGTPPRAPRGDTGGAPGA\PTY STPLMSLHRARLESSSTGSSFPADSAPV PLAVVSLDSR*GQWESRSSIHA\VTN*AS SSSSSSSSSFVR\YPRFIEFLHFDIQSTG Q/RITSRQHPPR/DFRDALF*LNS
2910	10961	A	3850	1	391	SPLNKVQLINELNEREVQLGVANKVSW HSEYKDSA WIFLGGLPYDLTKGDHICVF SQ\QRSTIVAVDNFNIGIKIGRTIRVDHVS NYRAPKDSEEDDVTRQLQEKGCARTP SPSLSESSEDEKPTTKP
2911	10962	A	3851	1	135	
2912	10963	A	3852	18	238	
2913	10964	A	3853	254	1424	

2914	10965	A	3854	8	1015	FLSAEREPEEMNPLTKVKLINELNEREVQ LGVADKVSWHSEYKDSA\WISLG\GLPY ELTEGDIICVFSQYGEIVNINLVRDKKT GKS\KGFCFLCYEDQRSTILAVDNFNIGIKI KGRTRVDHVS\NYRAPKDSIEDDDVTR QLQEKSGGARPPSPTLSESEDEKPTKKH KKDKK\EEKKKKKKEKEKADREVQAEQP SSSSPRRKT\VEKDDTGPKKHSSKNSER AQKSEPREGQKLPKSRTAYSGGAEDLER ELKKEKPKHEHKSSSRREAREEKTRIRD RGRSSDAHSSWYYWRSSEGRSYRSRSRS RDKSHRHKRARRSRERE\SSNPSDRWRH
2915	10966	A	3855	299	374	
2916	10967	A	3856	1	993	
2917	10968	A	3857	3009	3583	LFCLFFHILQPSHCWISEMVVQLSDSLTD LLDKFSNISEGLSNYSIIDKLVNIVDDLVE CVKENSSKDLKKSFKSPEPRLFTPEEFFRI FNRSIDAFKDFVVASETSDCVVSSLSP KGKAKNPPGDSSLHWAAMALPALFSLII GFAFGALYWKQRQPSLTRAVENIQINEE DNEISMLQEKEREFQEV
2918	10969	A	3859	880	1196	SPTTRRGTPGTCLKPTACAGAA*PGCSA RRTCASAAPLSTCPPSSCAAPPPAPAAVP STPRPTSPSPAAPASPSRRRTQTASTPA STNRAPSSCWAPTTRPLAP
2919	10970	A	386	15	466	GVPNNFIINKNKTSGWLQPLPRWL*AP VGGACHYPGLEARTEERAPCPSKYTGE EVLRIKNQGGTTPRGGGPGSAPRGSFL WST/PGSCPSITPHSLPAAR/PLPPTPRHPA PSSPPCTE/SAPSGPSSSQAPGITVAPGISQ VQRAAALR
2920	10971	A	3860	305	631	IEKISLEPKNRPSQIPNLVGP/RLFLVPGD FQSQVPNLFPLFKPSSGPHPAAGKGQPF LPWRSTGPERATPGGRPAACSALEAP SLRGPSGYSAQEPPIRRPISARI
2921	10972	A	3868	980	1498	VSLINLQVLRQSLEQVTETFTSYFKPSCQ/ PPTSPIRAMKWTELRLSCLPAGRQHYL LPATPPCSVRGVHGPSTVPPAAPSPTSA QSHQPASHPLSSPTFLFEPIKDAGTHASLF SRDRHLPFPTCHIRRPQPCLSPPHCSQGS RTGRAVTAALRMAAAAAMTGNQSPTRI
2922	10973	A	3869	94	484	AAAALAAASLLLRREDPGPGAGPSMAE TEALSKLREDFRMQNKS\VFILGASGETG RVLLKEILE\QGLFSKVTIGRRKLTDFE EAYKNVNQEVGGLKSLDDYASAFQGH DLGFC\CLGYHQEGKAGGG
2923	10974	A	387	50	481	FMEYLTLSFIHVLLQ*FIHC\VFHLFIHSFF YALMKSLIQ*FIHLYSCF/ICIDLLISSCIYS FIYALVKSLANSLTHSFIHTFLQ*FVHLFT PLLICSFTHSSIH*PSHSLTFIQLHLFFHAL VSGFIWSFIYLFCKINVFLIDK
2924	10975	A	3870	302	1187	TALVPRDKDWQSPDTLKTGICRCYFSPM AETEALSKLREDFRMQNKS\VFILGATVE TGRVLLKEILEQGLFSKVTIGRRKLTDFD EEAYKNVNQEVVDFEKLDDYASAFQGH HDVGFCCLGVTTTRGKAGAE\GFVRVDRD YVLSAELEKAGGCKHFNLLSSKGADK SSNFLYLQVKGEVEAKVEELKFDRYSV FRPGVLLCDRQESRPGEWLVKFFGSLP DSWARGHSVPVTVVRAMLNNVVRPR DKQMELLENKAIHGPGGKRHGSSQGH HTGRNGFYLFNLNTHDQIG
2925	10976	A	3871	71	335	PTRSTSSGSYMKRRSGSCSP/MISDTSVV LSMDNSRSSRAVVVKIETRDGKL VSES SDVLPK*TAAAAPPSLPLLRCPRAWEGG RYAW

2926	10977	A	3872	35	450	DIEECESMH*DDIRKHTEMENEFALIKKD MDEAYKNKVELESHLEGLTEEISFLTQL YEEEIRELHVDPDLGHICGAVH*QQLPGH EQHHR*QGTVRGDRQPQPG*G*EHEIK YEELQTLAWKHGMTRGAQRLRSPR
2927	10978	A	3873	2121	2371	LENQSPRHVYSLSLKSKNDVMLL/DTAI FCPEATSEALDVVTSWASEAGTEELAFG FGLVLSYCKLSTLSVASSFVGGDWL
2928	10979	A	3874	29	3977	AEVAHARWERCFFSPTPFLWGCFRDRL PGRACFRAGRLKRGSYNCSQLWLCV EKALAMDRSGFGEISSPVIREAEVTRTAR KQSAQKRVLQASQDENFGNTTPRNQVI PRTPSFRQFPTPKSRSLLRQPDISCILGT GGKSPRLTQSSGFFGNLSMVTNLDDSN WAAAFSSQRSGLFTNTEPHSITEDVTISA VMLREDDPGEAASMSMFSDFLQSFLKHS SSTVFDLVEEYENICGSQVNLISKIV
2929	10980	A	3875	597	1088	GCQRQVVPWRPPLQRAQDMAWQLL EYQELMNIKLALDIEIATYRKLEGEESQ LDGSMQNMSTHTKTGGYAGGLSSAYG DLTDPGLSYSLGSSFGSGAGSSFSRTSSS RAVVVKKIETRDGKLVSSESDVLPK*TA AAAPPSLPLLRCPRAWEGGRYAG
2930	10981	A	3878	1	2474	MPGYSALSNKPMLETTQMSITRGMGKL LVVRCGTEKAGPAVPGGMEGRSSTHV PLVLPPLVLLLAPARQAAAQRCPQACI CDNSRRHVACRYQNLTEVPDAIPELTQR LDLQGNLLKVIPAAAFQGVPHLTHLDR HCEVELVAEGAFRGLRLLLLNLASNHL RELPOEALDGLSLRRLELEGNALIELRP GTFGALGALATLNLAHNALVYLPAMAF QGLLRVRWLRLSHNALSVLAPALAGLP ALRRLSLHHNELQALPGPVLSQARGLAR LELGHNPITYAGEEDGLALPGLRELLD GGALQALGPRAFAHCPRLHTLDRGNQ LDTLPPLQPGQLRRLRLQGNPLWCGCQ ARPLLEWLARARVRSDGACQGPRLRG EALDALRPWDLRCPGDAQAQEEEELEERA VAGPRAPRGPGRGPEERAVAPCPRAC VCVPESRHSSCEGGLQAVPRGFPSDTQ LLDLRRNHFPSPRAAFPGLGHLVSLHL QHCGIAELEAGALAGLGRLIYLYLSDNQ LAGLSAAALEGAPRLGYLYLERNRFLQV PGAALRALPSLFLHLQDNAVDRLAPGD LGRTRALRWGL/HLSGNRITEVSLGALGP ARELEKLHLDRNQLREVPTGALEGLPAL LELQSGNPLRALRDGAQFPVGRSLQHL FLNSSGLEQVGTGHLAGLVQEAQGH QRAFTQQAFASPLVPGLGPGQLSLHLQK NQLRALPALPSLSQLELIDLSSNPFHCDC QLLPLHRWLTGLNLRVGATCATPPNAR GQRVKAAAASFEDCPGWAARKAKRTP ASRPSARRTPIQKTVWTR
2931	10982	A	3879	1	531	ETPSSEPMEEEEDDLELFGGYDSFRSYN SSVGSESSSYLESSEAEENEDREAGEL/H DLPAFAQPWDSSLLGWQWF*ASCL/LR CVVSWVQKPPSPRPRGSAASPAPGATP PTPRKPVSWLGYRENHRPKPKSCTRLP GLPKLEPSTLKGQDSWQMGGHQQDKTL WSWASTGGSS

2932	10983	A	388	119	1533	KKMNLAEICDNAKKGREYALLGNYDSS MVYYQGVMMQQDSRDIAQSVQRSQSLK GKWPTFRFGQELLAEYEQVKSIVKHFKK VFKIDKPSQISPVSLSR*THLEIPAVWPTA VPAEHRAPPQIRR/RQSRKTSEERNGRS RSPGTCRPSTSYIKE*/NSLLQVGTRTIEPE GGDDKGRKNMQDGASDGEMPKFDGAG YDKDLVEALERDIVSRNPSIHWDIADL EEAKKLLREAGVLPWWMPDFFKGIRRP WKNDSONLGKPYRAQDDIGMNIVGPL THGFSSASAAPETTRQPLFLLLLSLSKV KTFKGVLVMPGPGTGKTM LAKAVATEC GTTFFNVSSSTLTSKYRGESEKLVRLLE MARFYSPTTIFTDEIDSICSRRGTSDEHEA SRRVKSELLIQMDGVGGALEND DPSKM VMVLAATNFPWDIDEALRRRCFIWVG FPDVPQEKDTSVSPESCLLDWWWGL
2933	10984	A	3880	143	606	NKYTDYCQLLKKSKGVDDKKGKTASSLP EGSQSISREHLPAQSWLPWACL L L W L P A LL/HDEMOMRKQLPGLRSRAHSARQVR W/PCREAAAGCRMQRQASHLKSPEGKFH GHFLNTRVGRAGGNPHRPGKKWLLPSS VYVCNTEHCLWGAWCPKPNG
2934	10985	A	3881	253	514	
2935	10986	A	3882	950	1612	IIPILASVTQPKQPAWKTGTGKPKQVS ISITEKVKSMQYDKQGIADTWQVVGTV TCKCDLEGIMPNVTISLSLPTNGSPLQDIL VHPCVTSLDSAILTSSSIDAMDDSAFSGP YKFPFTPPLSFNLCFYTSQSVIDDQPSKL LLNDGIGELMGFNWSNRSCGQVGSNQY AYCMPYAADQRTWRRGAWTSKYRNKN ALYTFVKRFSHLRKQREKNPYP
2936	10987	B	3886	146	326	MDESAFPLCRTLGRVDSDDPGLPGCAS GPLAVPESEQKVHERKSLHWDLGTLVSL VRAQX*
2937	10988	A	3887	575	828	CYPKVGRKPIKGEGEAPGAREKKNFAAE KRGLIPHGRKCLPISPCTGTRGPWCPACSS SGCASADTCTPRGALGAQKPIRESNF
2938	10989	A	3888	3	267	AMVGGGGVGGGLENANPLIYQRSGER PVTAGEEDEQVPDSIDAREIFDLIRS*AW PLTPQPAYWYPGPSSCQGCYRCFLESLT MRN
2939	10990	A	3889	1	942	
2940	10991	A	389	293	805	KARDKSPFLGDLCLKDTGQQSLLQCRFF PFLGTKISCFQNVHSWQTITSDGLSAGDG GFGPKYQ/RSRGQIPSGNLPLNSSESDL LPTPHFPLQSQGLGSQVAQIDDVKAPPPF PAEPQPKRLRSPRPLLGAIESVAVSRSLP SGPTGTDAL*WLSVQKPPTRTIHGNE
2941	10992	A	3890	3	470	AMVGGGGVGGGLENANPLIYQRSGER PVTAGEEDEQVPDSIDAREIFDIRRCWAR AGSGGLRWGEQ*YRAAGGAASQGGVP GRGF*VGKGAESLFLHFPQLIRFLNDPÆ HSLTLEELNVVEQVRVQVSDPESTVAVA FTPTISHWSMGTIGVC
2942	10993	A	3891	2	604	ARSHRISGGGSAMVGGGGVGGGLENAN NPLIYQRFGEARPVTAGEEDEQVPDSIDA REVFDLIRSHQMTPEHPALTLEELNVVE QVRVQVSDPESTVAVGFPKPTHSGTCR HGPPLIGLSIKVKLLRLPSAFSRWDVA HLLPGDPLQEHAQEATLQKEAGWAT ALGRTHHLEVVNQCLSSPAPGTWAFV PLSLA
2943	10994	A	3892	73	204	

2944	10995	A	3893	1	846	QGANMPRYAQLVMGPAGIVKSTYCAT MVQHCALNRSVQVNLDPAAQHFNYS VMADIRELIEVDDVMEDDSLRFGPNGGL VFCMEYFANNFDWLENC LGHVEDDYIL FDCPGQIGVVTLTWPVMKQLVPALEQ WEFRVCGVFLVDSQFMVDHSRFIGHLA AALSAMISLEIPQVNIMTKMDLLSKKA KKEIEKFLDPDMYSLLEDSTDLRKAKN SRKLDLKAIMWDLIGWTYSLVRIF/IPYD QSDEESMNIVLQHNGFAIQYGEDLEFKR NPKEREE
2945	10996	A	3896	1	1319	MDYGLLCGQQLVPQVEPVIQRGHESLV HHILLYQCSNNFNDSVLES GHECYHPNM PDAFLTCTETVIFA WAIGGEGFSYPPHVGL SLGTPLDPHYVLLLEVHYDNPTYEEVLDA EKYKYKVLASDEGLLTGHNMVAVGFTW WKG LIDNSGLRLFYTM DIRKYDAGVIEA GLWVSLFHTIPPGMPEFQSEGHCTLECLE EALAEKPSGIHVFAVLLHAHLA GRGIRL RHFRKGKEMKLLAYDDDFDNFQEFQY LKEEQTILPGDNLITECRYNTKDRAEMT WGGLSTRSEMCLSYLLYYPRINLTRCASI PDIMEQLQFIGVKEIYRPVTTWPFIIKSPK QYKNLSFMDAMNFKFKWTKKEGLSFNK LVLSLPVNVRC SKTDNAEWSIQGMTAL PPDIERPYKAEPLVCGTSSSSSLHRDFSIN LLVCLLLL SCTLASTKSL
2946	10997	A	3897	1	394	
2947	10998	A	3898	1	150	
2948	10999	A	3899	708	911	
2949	11000	A	39	132	370	SNSPA*PSGEPGTMG/CRPPCPVNFILRK NGVPPCGPGGPKSPDLRTHPLGPPKG/RG IPGGTHCPGPPLGFKKPWPPGRV
2950	11001	A	390	2	428	GLPGSTTASAAAASASASSDAPSFQLG KPR LQQT SFYGRFRHFLDIIDPRTL FVTE RRLKEAVQ LLEDYKHGTLRPGVTNEQL WSAQKIK/SGYIPFGTPIVVG LLLPNQTLA STVFWQWLNHSHNACVNYANRNATKP SPA
2951	11002	A	3900	1	1349	MAAGQRRSSLSRLGSQFNC DPECQLSC LVGLEVQKEEVIRAAEGWKRAAPAGLR PTNYSNRQASEGRVVIAGNQSYQSRASP RPLARWKASANGRAPIAEPAAAVAGLG AGSGKRRRGWKMPVHSRGDKKETNHH DEMEVDYAENEGSSSEDEDTESSSVSED GDSSEMDD EDCERRRMECLDEMSNLEK QFTDLKDQLYKERLSQVDAKLQEVIVE RAPEHLEPAGNLQENMQIRTKVAGIYR ELCLESVKNKYECEIQASRQHCESEKLLL YDTVQSELEEKIRRL EEDRHSIDITSELW NDELQSRKKRKDPF WPDKKKPGVVSGP YIVYMLQDL DILEDWTTIKNAMATLGPH RVKTDPPVKLEKHLHSAISEEGRLYYDG EWYIRGQTICIDKKDECPTSAVITTINHDE VWFKRPDGSKSKLYISQLQKGKYSITFII MI
2952	11003	A	3901	38	383	
2953	11004	A	3902	252	526	

2954	11005	A	3903	777	1719	LLTLTFPRCSVAQPLPFTGGTSVSWALL ALHVAVVFLFAGAAGCVATLLHDAAM NPAEVVKQRMQMYNSPYHRVTDVRA VWQNEGAGAFYRSYPTQLDHDVFFQAI HFMDLWNSCRSTLTPKRSYNPDSHFFSG LCAGAVAAAAATPLADVCKTLLNTPGVL GFELTHYRTYQGMASAFRTVYQVGGV TAYFRGVQARVIYQIPSTAIAWSVYEFF KYLIHLKGQEEWRAGKVKLALNESPGV QDDTDASWSHSLSPGMLPPQVELKGKE KGLSPTDFGVLNTSSCQPLPPFLPGP KHVQQSTPQHL
2955	11006	A	3904	1	1788	MLQQGAILEAETKPSDTPKYTSALIFNFP ASTADLGKTKRPAVEEKETPNKTRAQSL FLLAKERRQDPFRPGLSALPLVKMAAIG GAAHSEGRRLPCRPRPFTRSPPRPSRLDA LQVQRDQSDGAALFGQPLQGRAGLSER PCQTERGKKPQQRQLSNRLQTAFRRGPL GSGFQLRWSCRGCNVNAARSPPGSAQR SRSREPLLGPWPGRGWQLCESLKKIA KGWVSQDPSPRQLKECGQSASTSPRTPY SQDLLQHPKLEVAADPRTRGTREPAAL VERLEMLSGAGSVVDAVPLLVRRRRR RRRRHSAQRALAAAAAAAASEPLDCQM RLCASLGVFSTAPSSSACRADITDCVSGL AGGEMVPRRVLADQLTEEQIAEFKEAFS LFDKDGDDGTTITKELGTVMRSLGQTQT EGELQDMINEVYADGNGTIDFPVFLTM MARKMKDTDSEEEINRESFRVFAKDNG YISAAELRHVMTNLGEKTDLEVDEMI READIDGDGVNYEEFVQMMTGKMED LTFQLPFSPPLEESNWNLLTLLQKKEKK KKVHLFHSCFLYSKTECQKYL LVHTHQ NLHVLVGGPVP
2956	11007	A	3905	1	351	GPPRPPTPLPKPIRGATARPPRSRF*PRS DIPPLSRVLVARPPSPPLGKPLWIMGRP RPPIAPLARAPMGRPNRAWMLLLPRRCF KLFEGNRRQCSSRGCHHGSGRRAGDRP NLS
2957	11008	A	3906	3	345	SCRCKRKAGKGRPGEQTDRTPTQPTSN ELSSHTTAYASNQPI*LTRAPPSTQVRP VPGPPAGAVVAVPGGALASVSFDSRDSK TAAQSSSEVGALPPHQDVTICAVRAAT
2958	11009	A	3907	3	387	RPLQTKGRKGQAGFGRSPARLPEPWWQ PREEH/WASVSFDSRDSKMAAQSAKVV LKSTTKMSLNERFTNMLKNKQPTPVNIR ASMQQQQQLASARNRRLAQQMENRPSV QAALKLKQKSLKQRLGKSN
2959	11010	A	3908	565	719	GRDVTPRSKPAPRWTSRSSPGLKKRW CSRSWRSWERGPR*SSALGKSNQARL/ WPTHGPGQGSNRRTRPTYSREALPRE GLRGGRATENPT*GRDVTPRSKPAPRW SRSSPGLKKRWCSRSWRSWERGPRAW SYGSWRNRW
2960	11011	A	3909	299	557	ADGSADLDSQRSSNELSHTTAYASNQP/ LHLANPSPSTSQLRFRPVPVAVPGAVG GSPREEHLASVSFDSRDSKMAAQVSSEK LC
2961	11012	A	391	3	297	
2962	11013	A	3910	1	420	
2963	11014	A	3911	2	437	
2964	11015	A	3912	10	250	
2965	11016	A	3913	2824	3156	SNEGVKGLSRQKAWTADYNFCLGGNCH FSGFYFSDSCYSSYRRCTCCDFCNSG RNCSGFWFGLCCTILCSDF*SSFLISRSTW TPGLAIIPTRRLIT*TLISWSTV
2966	11017	A	3914	1	70	
2967	11018	A	3915	42	140	

2968	11019	A	3916	4594	4848	HIYCE*SLYLFRE*DLDDGDLDLECELAR LRDLVYDLE
2969	11020	B	3917	565	1161	MYHGWVPDLHIHAEDTLLPFYLGEKDD VTYAIKPTCWPGLDIIPSCALHRIETELM GKFDEGKLPTDPHMLRLAIETVAHDYD VIVIDSAFNLGIGTINVCAADVIVPTPA ELFDYTSALQFFDMLRDLLKNVDLKGFE PDVRILLTKYSNSNGSQSPWMEEQIRDA WGSMLVKNVVRETDEVGKDLHALLVR L*
2970	11021	A	3918	3	226	LSVLFCCFGVESNFNFYVYSCCVFMATS QTDIFCMHTYSLIEMIVIHYNLEFF*ISKM ATIAVLGFLRLDIYHV
2971	11022	A	3919	1469	2806	CGSPPFATSSFFALS GHVLF AKLCTMVAP KLRSWYAVYGALAVMGTMGPWYLLL LLGHCVGLYVASLLGQPWLCLGLGLAS LASFKMDPLISWQSGFVTGTFDLQEVLF HGGSSFTVLRCTSFALSCAHPDRHYSL ADLLKYNFYLPFFFFGPIMTFDRFHAQVS QVEPVRREGELWHIRAQAGLSVVAIMA VDIFFHFFYILTIPSDLKFANRLPDSALAG LAYSNLVYDWVKA AVLFGVVNTVACL DHLDPQPQPKCITALYVFAETHFDRGIND WLCKYVYNHIGGEHSAVIPELAATVAT FAITTLWLGPCDIVYLWSFLNCFGPQTL KLWVPKTGQKWGPPKHEIEGLLCQVQ MSRRVRLFGAHELSPHIMYNLVSLN SLAKFTELVARRLLLTGFPQTLSILFVTY CGVQLVKERERTLALEEEQKQDKKKPE
2972	11023	A	392	1	885	
2973	11024	B	3920	54	316	TIWDGEETVYCFKERSRAALKACYRGN RYPTPDEKRRLATLTGLSLTQVSNWFKN RRQRDRTGAGGGAPCKRKLPPGQPCVW QPHRDG*
2974	11025	A	3921	1	2219	MATLPAEPSAGPAAGGEAVAAAAATEE EEEEARQLLQTLQAAEGEAAAAAGAGA GAAAAGAEGPGSPGVPGSPPEAASEPPT GLRFSPEQVACVCEALLQAGHAGRLSR FLGALPPAERLRGSDPVLARALVAFQR GEYAELYRLLESRPFAAHHAFLQDLYL RARYHEAERARGRALGAVDKYRLRKKF PLPKTIWDGEETVYCFKERSRAALKACY RGNRYPTPDEKRRLATLTGLSLTQVSNW FKNRRQRDRTGAGGGAPCKSESDGNPT TEDESSRPEDLERGAAPVSAEAAAQGS FLAGTGPPAPCPASSSILVNGSFLAASGSP AVLLNGGPVIINGLALGEASSLGPLLLTG GGGAPPPQSPQGASETKTSLVLDPQTG EVRLEEAQSEAPETKGAQVAAPGPALGE EVLGPLAQVVPGPPTAATFPLPPGPVPAV AAPQVVPLSPPPGYPTGLSPTSPLNLQP VVPTSQVVTLQAVGPLQLLAAGPGSPV KVAAAAGPANVHLINSGVGVTALQLPS ATAPGNFLLANPVSGSPIVTGVALQQGKI ILTATFPTSMVLSQVLPPAPGLALPLKPE TAISVPEGGLPVAPSPALPEAHALGTLSA QQPPAAATTSSLSLPPSPDGLLPNPPA PPPEGLMLSPAAPVWSAGLELSAGTEG LLEAEKGLGTQAPHTVLRPLDPDPEGLL LGATAGGEVDEGLEAEAKVLTQLQSVP VEEPLEL
2975	11026	A	3922	185	478	VSDTLWALAGLAAGRWAGGCQTLGLQ GVVQGLGLLINGPRAGAAPLSLGNLHPP SAARWHPS*AASHTGTGQSLVGIVEPHN PTSSGG*RPGTAGRSQ

2976	11027	A	3923	74	593	RGWVMWVDEFQPALVLSPYERQLNLDA SVQHLEDGDGKRKRSSSSSPRSINKKAKA LDNSLQPKSLAASSPPPCSQPSQCPEEK QGVKPHEGPRGPLSASGVPGQPWPQG GG/WWGAAGRVAEPRTESREPVSAGT SSRSPSPTGFRQPPHPSARPSRAAPGQR GWAGDRR
2977	11028	A	3927	1	2936	MALMFTGHLLFLALLMFAFSTFEESVSN YSEWAVFTDDIDQFKTQKVQDFRPNQK LKKSMHLPSLYFDAGEIQAMRQKSRASH LHLFRAIRSAVTVMLSNPTYLPPPKHA DFAAKWNEIYGNNLPLALYCLLCPEDK VAFEFVLEYMDRMVGYKDWLVENAPG DEVPIGHSLTGAFATDFLYNLLDNHRR QKYLEKIWVITEEMYEYSKVRSWGKQL LHNHQATNMIALLTGALVTGVDKGSKA NIWKQAVV
2978	11029	A	3928	2	512	
2979	11030	A	3929	1	399	
2980	11031	A	393	2	674	SCPLSCTSAATGLWVKEGLRIVSSVLLGL SCPWGSPLAEELDLGEG/RLWRTSFYGR FRHFLDIIDPRTLFTVTERRLREAVQLLED YKHGTLRPGVTNEQL*SAQKISQAIYHP DTNEKIFMPFRMSGYIPFGTPIVVGLLP NQTLASTVFWQWLNQSHNACVNYANR NATKPSASKFIQGYLGAVISAVSIAVGL NVLVQKANKFTPATRLLIQRFVFPFAV
2981	11032	A	3930	1	1812	NRRTRPGCGVVTCTYRREFIQRKLEAAL NVHDGCVNTICWNDTGEYILSGSDDTKL VISNPYSRKVLTTIRSGHRANIFSAKFLPC TNDKQIVSCSGDGVIFYTNVEQDAETN RQCAQFTCHYGTTYEIMTVPNDPYTLSC GEDGTVRWFDTRIKTSCTKEDCKDDILIN CRRRAATSVaicppipyYLAvgCSDSSVRI YDRRMLGHKELQGNYAAGRGTGIGLP RFISLPHLNNKSCRVTSLCYSEDGQEILV SYSSDYIYLFDPKDDTARELKTPSAEER REELRQPPVKRLRLRGDWSDTGPRARPE VSEERDGEPESPMCPLMQRMSDMLSR WFEEASEVAQSNRGRGRSRPRGGTSQSD ISTLPTVPSSPDLEVSETAMEVDTPAEQF LQPSTSTMSAQAHSTASSPKESPHYSFC YFLPDS\DQRQSVEASGHHTHHQSEFLR GPEIALLRKRLQQLRLKKAQQRQQLA AHTQQQPSTSDQSSHEGSSQDPHASDPS SVVNKQLGMSLDEQQDNNNEKLSPKP GTGEPVLSLHYSTEGTTTSTIKLNFTDEW SSIASSSRGIGSHCKSEGQEEFVPQSSVQ PPEGDS
2982	11033	A	3931	1	1878	
2983	11034	A	3932	2	202	
2984	11035	A	3933	9	111	SRQAWHEASNYGPMKSGNFGGIURNMG GPYGGGNL
2985	11036	A	3934	297	611	QWGLRFMNGVLSGGLSVQTASPPSASR RHFFSLGVGDGELSHGGRCPAGVKVGR GGGNSYSLSKARCFGGHGVSSASVSAGS RSS*ARLRSFSPSLTGTGFGGR

2986	11037	A	3935	14	1276	KSGGTALAAVAAAPGPVRRCSSQSCFSS SGSSHYSARTSPVVRVPRRSLSSRSAAGN RAEATESAMEKTLETVPLEKKREKEQF RKLFIGGLSFETTEESLRNYEQWGKLT DCVVMRDLASKRSRGFCFVTFSIHGLE VDAAIASRPHSINGEVVEQKRAVAREE SGKPGAHVTVKKLFVGGIKEDTEEHHLR DYFEEYGKIDTIEIITDRQSGKKRGFGFVT FDDHDPVDKIVLQKYHTINGHNAEVRK ALSRQEMQEVQSSRSRGGNFGFGDSR GGGNFGPGPGSNFRGGSDGYGSGRGF GDGYNGYGGPGGGNFGGSPGYGGGR GGYGGGGPGYGNQGGGYGGGYDNYGG GNYGSGNYNDFGNYNQGPSNYGPMKS GNFGGSRNMGGPYGGGNYGPGSGSGS GYGGRSRY
2987	11038	A	3936	827	2064	QRRVPCGGAPRRVVSRAAAVLTTAPG RVRFVVRGDLSHLARLREIGLKRLSPR WREKKKQFRKLFIGGLSFETTEESLRNY YEQWGKLTDCVVMRDPASKRSRGFGFV TLSSMAEVDAAAMAARPHSIDGRVVEPK RAVAREESGKPGAHVTVKKLVGGIKE DTEEHHLRDYFEEYGKIDTIEIITDRQSG KKRGFGFVTFDDHDPVDKLDLRKYHTI NGHNAEVRKALSRQEMQEVQSSRSRG GNFGFGDSRGGGGNFGPGPGSNFRGGSD GYGSGRGFGDGYNGYGGPGGGNFGGS PGYGGGRGGYGGGGPGYGNQGGGYGG GYDNYGGGNYGSGNYNDFGNYNQGS SYGPMKSGNFGCWRNMGGPYGGGNY GPAGSGSGGNYGGRSPILKLLPICHGAS LV
2988	11039	A	3937	36	320	GPGRWVVVDEVMTWLELEQYPVSFLKQ PFEIGRHLDPKGTYGICVNMCPGNKSC/ PRGKRCQSNCGHVCKVVPETSKSQPLR CSQKMTWSSL
2989	11040	A	3938	3	713	
2990	11041	A	3939	1	519	
2991	11042	A	394	485	1044	HLVPLCPCNLKAGRCTVQERLLVICCS RSWRWRNLM*RWLNYPVSSGHRH*SS LARETSVDPDMRKGPAGAEGKGKAVGC KGVSOETAAYWKRTSSSLEPTWLLTN KPMFFGFRNLFAPTFRHTPEALWLTPC HRGSPALHIEAFMPAALPSGTASCELP WVYQLSGVLCCAPWVKEA
2992	11043	A	3940	1	966	MGHHLMDKLVALGGLYYAIQRHYATK CSVLKNDQILVIGLFMIQNVIRKHFANP LSALFLQGGIELFAAIAEIHITVAERNHA ITQIRLEAQTFIDSLKEWHNAIRKSLDYE ALQAFEFVRVGATDRGFPALSSALVRVL VLDANDNSPFVLYPLQNGSAPCTELVPR AAEPGYLVTKVVAVDGDSGQNAWLSY QLLKATEPGLFGVWAHNGEVRTARLLS ERDVAKHRLVVLVKDNGEPPRSATATL QVLLVDGFSQPYLPLPRAAPAQAQADSL TVYLVVALASVSSLFLFSVLLFVAVRLC RRSRAAPVGRCSVL
2993	11044	A	3941	1	2783	RILSVDDFVELNVSSLVAVAEGIGYRDL DSNMKKLGRIHPNRQVLAFILMVFLSQV RLEPIRYSVLEETESGSFVAHLAKDLGLG IGELASRSARVLSDDDKQRLQDRQTGD LLLREKLDREELCGPIEPCVLHLQVVE MPVQFFQGELLIQDINDHSPIPFEREVLL KILENSQPGTLFPLIAEDLDVGSNGLQK YTISPNSHFILTRNHSEKKYPDLVQDK PLDREEQPEFSLTLVALDGGSPPRS SGT
2994	11045	A	3942	383	703	NRITPTSARINLSILVPSAINNGSMTE DINRTVISGTPRQNSIKMTDKIRTIGI WERRPGVVVLTCLIMV*HLTSAIANRLNLLRKL

						RMVIFSHRLKVSSMKSA
2995	11046	A	3943	1887	3072	NFVMCHGEPWLAGRTVVPVSTLSGPEL ALQKLKGTPLGRYLFTSSTLTRDFIEIGR DAGLWGRRSRLRLSGKPLLLTELFYRRH RCTKRKKICDCISANVWAVLKTVEAAGS DRPVQCLTITAVQREDTQSLSVITAELE PVSSPHFIREAGQYGTGRSSKEREVQPVV QRSFSNWIRNNCGDICELSPTSGDHPPPS GPGLYSARKAIMQHYQARGMRDVTVED IYIGNGVSELIVQAMQALLNSGDEMLVP APDYPLWTAASVLSGKAVHYLCDESS DWFPDLDDIRAKITPRTRGIVIINPNPTG AVYSKELLMEIVEIARQHNLIFADEIYD KILYDDAEHHSIAPLAPDLLTITFNGLSKT YRVAGFRQGWVHRFFTPRLTVQAI
2996	11047	A	3944	623	2587	SPRKGKGKGGKANRVLLTGAPLDPIDLS QSAVSHSVKEL/ENHTGVRLLDRTTREV VL/TDAGQQLALRLERLLD/ELNSTLRDT GRMGQQLSGK\VRVAASQTISAHLIPQCI AESHRRYPDIQFVLHDPQQWVMESIRQ GDVDFGVIDPGVGDLOCEAILSEPFLL CHRDSALAVEDYVPWQALQGAKLVLO DYASGSRLIDAALARNGIQANIVQEIGH PATLFPMAAGIGISILPALALPLPEGSPL VVKRITPVVERQLMLVRRKNRSLSTAAE ALWDVCNCAIQPFFTAITRCIGSVTVKLV LVPVGKSEFLAAQHKVVTCPNAGDIAV VASVIGLICITLSKERFEPPTAAGEIVADT VQEHIVVEIHAIRRTVGAIMQVEIKSGV TQAYLQLGINEKLGLSGRPDRPIGCLGTS KIYRILGKTVVCYPIIFDLSDFYMSQDVF LLIDDIKNALQFIKQYWKMHGRPLFLVLI REDNIRGSRFNPILDMLAALKKGIGGVK VHVDRLQGPLENDLVVHVALIAESQRLQ VFLNTYGIQTQTPQQVEPIQIWPQQELVK VTLGAFGHEEEVISNPLSPRVIQNIYYKC NTHDEREAVIQQELVIHIGWISNNPELFS GMLKIRIGLQNECSLVIQVSTIIPAT
2997	11048	A	3945	102	2392	RKQMNYSLKQLKVFTVAQEKSFSSRAG ERIGLSQSAVSHSVKELENHTGVRLLDR TTRAVVLTADAGQPLALRLERLLDELNST LRDTGRMGQQLSGKVRVAASQTISAHLI PQCIAESHRRYPNIQFVLHDPQQWVME SIRQGDVDFGVIDPGVGDLOCEAILSEP FLLCHRDSALAVEDYVPWQALQGAKL VLQDYASGSRLIDAALARNGIQANIVQ EIGHPATLFPMAAGIGISILPALALPLPE GSPLVVKRITPVVERQLMLRVDLRFAQK FQIGDRKILRSGNNAVNVLPAAATCGFFP VCCWRFAYGCCSALLRIPRLYSVFIISL LYGFSRAHISSPGACWVFIHERFGQFMY GLYPHDQRWRINLALLIGLVSIAPMFWKI LPHRGRYIAAWAVIYPLIVWWLMYGGF FALERVETRQWGGLTLTIASVGIAGAL PWGILLALGRRSHMPIVRILSVIFIEFWRG VPLITVLFMSSVMLPLFMAEGTSIDKLIR ALVGVLFSAYVAEVVRGGLQALPKG QYEAESLALGYWKTQGLVILPQALKLE TVRQPQTLAMEEINCHHNYVQKEQHFQ EEIVTRKGAVSARAGQYGIIPGSMGAK SFIVRGLGNEESFCSCSHGAGRVMSTRK AKKLFSVEDQIRATAHVECKDAEVIDEI PMAYKDIDAVMAAQSDLVEVIYTLRQV HSCRAGETGAVAPASDRGKGGDGNLRS NRGRRGAGVAASALPARHRARGRLPLC YR
2998	11049	A	3946	2	331	

2999	11050	A	3947	3	116	
3000	11051	A	3948	3	162	
3001	11052	A	3949	181	804	RPLPRIGCCGPGAGQVGEARSPRVSLCF APCRLLRAGGGRALRRRGPGTPGPVARP SYSSFTQGDSWGEGEVDEEEGCDQVAR DLRAEFIMGQWSEPRKLSVLPDRNGS PVLDPKIRNGIFPSGRGQQEPSLRRWPFQ VLSILCSLLFAILLAFLLAIAYLIVKELHA ENLKNEDDVTGLLGFWTLIISLTAGIL LQLFLGQ
3002	11053	A	395	901	1213	SQHFGRPRWADHLRSGV*DQPGQHDET PSLLKIQKLAGYSGEHL*SQLLRRLRHEN CLNPGSGGCSEPRLLHHCTPAW/VAEPDS VGGGVGGKEKNNTSNMLQTRP
3003	11054	A	3950	1	149	
3004	11055	A	3951	1	1896	
3005	11056	A	3952	3	275	
3006	11057	A	3953	2	395	
3007	11058	A	3954	1	209	
3008	11059	A	3955	466	3315	EMVPRWAIYQGFQDCLVHHASSRASGL WKLLNPCRGLRCPDTRLPTSRWPNRDTR SASTQLLGKQSLPPAPEADPVFLPQEENE PPSPLVSGIIDYNMPLTSTYLKQMKLRV MNSQEQAGSSPTPIQTERHTAQLLLTAD QTLVLPATQHYVVLKKFPRPGAEDIMSG GPTLEAAEFDDLIGKCLPDRPIAGSVRLG DRIWNPRGSPRRRCRLHGQCVPGSLER RPRDYPITLQLWLARRQDPARCGLAEHN DR
3009	11060	A	3956	11	755	ETHAPPSGVWGLERPSHPADQEIAGGGQ QTAPAWKPHSHPTPKSCGDQTKTTLHT ERREDKPSFTRAGWGWNKGPVTEG AGSPGGSSHGAGLNRDHPLOSQPGRRAI PWPQRAPTHMLFSMTRGQSPGAAPGAQ PEISKLAGEYKKQKKQRSCLRKKCHP/QE AGHRQVVAHSAGPLQGEAAGEGRGEG AFWLKARNISKYSSLGINIPNKGAAQGSC LGKVGCRRHDPRHSGLSAPFPRPMSQAL
3010	11061	A	3957	175	559	VKRQLRRLRRSPWPDEKPKGVKTENN DHINLKVAGQDGSVEQFKIKRHTPLSKL MKAYCEIRQGLSMKQIKIPDFDGGQPAINE TDTPATVGKWKDERYQLMVFQQARPG GVYLRKRELCFLYSQNSVSF
3011	11062	A	3958	140	380	
3012	11063	A	3959	98	426	LLTPSSSAALKGESVQWHLREAGQSLPR RLTCAGWNKRFLHWIDQLSG*TQTCLLL VVFWIATE*LGESLPL*APIGGTQPW*F LIGAMKKHQUETGENDHFNSPGPSH
3013	11064	A	396	110	1012	KTTRGYTLLHCAAAWGRLETLKALVEL DVDIEALNFRERARDVAARYSQTECVE FLDWAGLNPGTATHDSDEEAFLTRVW STGHNDSGVKQRMGQKEIQNATSSNHF TCPSSYLQRKKGV*FVGLLW*FRNVSTL LMKTFLPQARNSPPETPSGTITTQITGKIC RMYFWSYMESEGPPESERAFFSQEEEE NEEEAAQEPEETGPKNPILLQPALTDGVE GLQKIFEDPENPHHEQAMQLLLEEDIVG RNLLYAACMAGQSDVIRALAKYGVNLN EKTTRGDTLLHCAAAWGRLETL

3014	11065	A	3960	234	1050	ARTLKRRWKVRKTVIGRKVQTMKILETL RISALLWEEVLLLGLKDKEYTSFWND CISSGLRGILIELAMRGRIYLEPRTMRK KRLLDRRVLLKSDSPTGWDVYWDETLKH IKATEPTETVQTWIELLTGETWNPFLQY QLRNVREERIAKNLVEKGILTTEKQNFLF DMTTHPVTNTTEKQRLVKKLQDSVLER WVNDPQRMKRTLALLVLAHSSDVLEN VFSSLTDDKYDVAMNRAKDLVELDPEV EGTKPSATEMIWAVLAAFNKS
3015	11066	A	3961	1	1074	MEPIGARLSLEAPGPAPFREAPAEELPA PVVPCVQGGGDDGGGASETSPDAQLGD RPLSPKEE/CRPPGAGGAAGMPPLPRAL LFLARRPHL/VRRPSSCSSSNRRWHWA A/SGAEDAQLGPGGCCAKCKKRVQFAD TLGLSLASVKHFSEAEEPQVPPAVLSRLR SFFPMRAEDLEQLGGLLAAAAVAAPLSAP PSRLRPLFQLPGPSAAAERLQQRVCLER VQCSTASGAEVKSGRVLSCPGPRAVTV RYTFTWRSFLDVPAELQPEPLEPQQPEA PSGASEPGSGDAKKEPGAECFHFSLCLPP GLQPEDEEDADERGVAVHFAVCYRCAQ GEYWDNNAGANYTLRYARPADAL
3016	11067	A	3962	42	424	
3017	11068	A	3963	3	899	PPNVFSPASLPFFPAEGGPGRSRWREGG YLSQSRSGRLSQEEAASRSAGGMAGAPD ERRRGPAAGEQLQQHVSCQVFERLA QGNPQQGFFSSFFTSNQKCLRLLKTLET NPYVKLLLDAMKHSGCAVNKDRHFSCE DCNGNVSGGFDASTSQIVLCQNNIHNQA HMNRVVTHELIHAFDHCRAHVDWFTNI RHLACSEVRAANLSGDCSLVNEIFRVIQ FGLKHPPQTICVRDRATLSILAVRNIKE VAKKAVDEVFESCFNDHEPFGRIPHNKT YARYAHRDFENRGRVYYSNI
3018	11069	C	3964	165	347	
3019	11070	A	3965	871	1194	EFVFFFETESFSVTQLECSGHNGLHCN LHLPGSSNAPASASRVARITGAHHHARLI FVFLVEMGFHQTGWAMLVLKLPDIQVIC PPWPPQSAGIYRHEPQHPGRK
3020	11071	C	3966	54	197	MVLSSFNFOKAIKLALLKYFKISFQLFPF YVHKIGCRHSHFAMNVS**
3021	11072	A	3967	263	742	SRSHDHLTYTVVPSWNNFRALRISNSK NEMFMSFLFREMKKKLPDSGDLAL EGKDKEKESTVHIETHQNTSKNVAAVQP MKR\GQKSKMKMKMEKY*DQDEEDREL IMKLLGSAGSNKEEKGKKGKGTCKDE PVKKQPQKPRGGQVSDNIKKE
3022	11073	A	3968	189	1393	SHTDFPYDNSTDGGDTSSDEDKEEHETP VEVELMTQVDQEDITLQSGRDELNEELI QEESSEDEGEYEEV/REKDQDSVGEMKD EGEETLNYPDTITIDLSHLAQPQRSIQKLA SKEESSNSSDSKSQSRRLSAKERREMK KKKLPDSGDLALEGKDKEKESTVHIE THQNTSKNVAAVQPMKRGQKSKMKMK KEYKDQDEEDRELIMKLLGSAGSNKEE KGKKGKGTCKDEPVKKQPQKPRGGQ RVSDNIKETPFLEVITHELQDFC/AVDD P/HLIDQGKEPDLDDQQNEENLDSFDQ GQPH\PEDVLLGFAIPICAPYTTMTNYKY KVKLTPGVQKKGKAAKTALNSFMHSKE ATAREKDLFRSVKDTDLRNIPGKVKS CTQSSERKKEIAEMKF
3023	11074	A	3969	192	1510	
3024	11075	A	397	247	496	
3025	11076	A	3970	68	382	MSVPDEEERLLRLTQRWPRASKFLLSGC AATVAELGTRLPTPGPPGPVARAALGEE TAGAASRPGSAQSKRSPPSHARLAEVAV

						EARPRGRRRDLEVSTAFSF
3026	11077	A	3971	3	1451	GAVRTWGRGFQTEKQASLLNFWNPPT TAQVTIEAEPKVSQKGDVLLLVHNLPO NLAGYIWYKQMKDLYHYITSYVVDGQ IIYGPAYSGRET VYSNASLLIQNVREDA GSYTLHIVKRGDGRGETGHFTFTLYRH SLDSALSLEVTGSSQPL*DTWENCPTLW LHCLMTELTSGLDVLPVISAEPSPRS GFPVSKGFKDNWKFHHPSLGCPWQGKL QRKHTSGGKVRLLKRRFQHCMLQVRTT SETPKPSISSNLYPREDMEAVSLTCDPE TPDASYLWWMNGQSLPMTHSLQLSKNK RTLFLFGVTKYTAGPYECEIRNPVSASRS DPVTNLNLLPKLPKYTTNNLNPRENKDV LAFTCEPKSENYTYIWWLNGQSLPVSPR VKRPIENRILILPSVTRNETGPYQCEIQDR YGGIRSYPVTLNVLYTTKHSGLYACSVR NSATGMESKSM TVKVSAPSGTGHLPL NPL
3027	11078	A	3972	1	1008	
3028	11079	A	3973	3	1374	
3029	11080	A	3974	1	1854	
3030	11081	A	3975	1	1319	
3031	11082	A	3976	1	2247	
3032	11083	A	3977	1	1993	
3033	11084	A	3978	1	1006	
3034	11085	A	3979	3	1095	AQLTAVLRKFLDPRLISTEENTQAAETM GPLSAPPCTEHIKWKGLLVASLLNFWN LPTTAQVTIEAQQPKVSEGKDVLLLVHN LPQNLGTGYIWYKQIRDLYHYITSYVVD GQIIYGPAYSGRETAYSNASLLIQNVRE DAGSYTLHIKRGDGRGVTGYFTFTLYL ETPKPSISSNLPREAME TVILTCDETP DTSYQWWMNGQSLPMTHRFQLSETNRT LFLFGVTKYTAGPYECEIWE/SGSASRS PVTLSP/RMGPDLPRIFFSSPLNYFRER NLGFVPGLGDF*TPPAQYSWTINGKFQL SGQKLFIPQITPKHNGLYACARSATGE ESSTSLTIRVIAPPGLGTFCFQ
3035	11086	A	398	653	1139	RPFPPHSESONPPRQ/PDSSPTGTST*PA DTHCPRPVSAQGGTAEG**PRVHGPS PLPHSIGSAPPQCQEGAPAGEWAREPGE DGVPGAPGQN*GKMEFSGAG/GQVPSR VVEGVQSHLRSEGPPACPAVPCAAEGP DGRPGNTGRGGPGLRNQRRWEEW
3036	11087	A	3980	3	1442	IRADPAHELENCSCPGKRLSTERGRTAQ LTAVLREFLDPRLISTEENTQAAETMGTL SAPPCTQRIKWKGLLLTASLLNFWNLPT TAQVTIEAQQPKVSEGKDVLLLVHNLPO NLGTGYIWYKQMRDLYHYITSYVVDGEI IIYGPAYSGRETAYSNASLLIQNVREDA GSYTLHIKGGDGRGVTGRFTFTLHLET PKPSISSNLPRETMEAVSLTCDPETPD ASYLWWMNGQSLPMTHSLKSETNRTL FLLGVTKYYLQDPIECEIRNPVSASRSDP VHPGISCPKLPKYTTNNLNPRENKDVL NFTCEPKSENYTYIWWLNGQSLPVSPRV KRPIENRILILPSVTRNETGPYQCEIRDY GGVRSDPVTNLVLYGPDLPRIYPSFTYY RSGEVLYLSCSADSNNPPAQYSWTINEKF QLPGQKLFIRHITTKHSGLYVCSVRNSAT GKESSKSM TVEVSGKVDPKHRWQ

3037	11088	A	3981	79	1565	EASLLEDDDDGMVYLRPLTSHQYRTAQL RAMLRKFLDPRLSSTEENTQAAETMGPL SAPPCTQRITWKGLLLTASLLNFWNPPTT AQVTIEAEPTKVSKGKDVLLLVHNLQPN LAGYIWYKGQMKDLYHYITSYVVDGQII IYGPAISGRETVYSNASLLIQNVLTREDA GSYTLHIVKRGDGTGETGHFTFTLYLE TPKPSISSNLYPREDMEAVSLTCDPETP DASYLWWMNGQSLPMTHSLQLSKNKR TLFLFGVTKYTAGPYECEIRNPVSASRSD PVTNLNLLPKLPKPYTINNLPRENKDV AFTCEPKSENYTYIWWLNGQSLPGSV RVKRPIENRVLIFPCSRGIETGPYQCEI RDRLWVGLRSLPSPWNVPLMGPDLPRI YPIYFTYLPFQGGKPSDLSWLSRES*PHR AGVFFWQFNGGSFSGHQGKLFIPIQIT KHSGLYACSVRNSATGMESKSMITVKV SAPSGTGHLPLNPL
3038	11089	A	3982	1	2045	MLEAAVHAPGNSDVTRTRCATQVLKPL VSYGQAETGFSVPQLKYPPWDGLLRDI PPGTLPVEHSPCSLAALQFLNATSTHGE SAFARRKLESSFSQHSLQEGHRHGSRLSP SGAPVKDSGSRTPAGSRGGQHPQSLLL CGRDDLQASSGHGPFLLLPPELPSPRDA LQLLREASKFPTDKRQGRSWSVAITNTA ATSLEWVPFHAFAPRSTLVSQQLSTER GRTAQLTAVLREFLDPRLISTEENTQAAE TMGTLSAPPCTQRIKWKGLLLTASLLNF WNLPTTAQVTIEAEPTKVSEKDVLLLV HNLPQNLTGYIWYKGQMRDLYHYITSY VVDGEIIIYGPAYSGRETAYSNASLLIQN VTQEDAGSYTLVHIKRRDGTGGVTGHF TFTLHLETPKPSISSNLPREAMEAVILT CDPATPAAGYQWWMNGQR/LSPMTHR LQLSKTNRTLFIQVTKYIAGPYECEIRNP VSAISRSDPVTNLNLLPKLPKPYTINNLP RENKDVLNFTCEPKSENYTYIWWLNGQ SLPVSPRVKRPIENRILIPSVTRNETGPY QCEIRDYGGIRSDPVTNLNLYGPDLPRI YPSFTYYRSGEVLYLSCFADSNPPAQYS WATINGKVFSLAQGQKLSIPQITTKHSGLY ACSVRNSATGKESKSIITVKVSDWILP
3039	11090	A	3986	212	461	TEEHLVSPHWKGCGRKVKRLFQVRRGR GWIQTRQPGSMVKEPPLSEAGAESHVSC /RQGDCSRPPSFPLSPERVTPWLPDSHTW

3040	11091	A	3987	1	2353	MRPPRAPVVPDLGGPRLCPVPAAGGAR SPSSPYSVETPYGFHLDLDFLKYIEELER GPAARRAPGPPTSRRPRAPRPLAGARS PGAWTSSESASDDGGAPGILSQGAPSG LLMQPLSPRAPVRNPRVEHTLRETSRRL ELAQTHERAPSPGRGLVREQMAAALRR LRELEDQARTLPELQEQVRALRAEKARL LAGRAQPEPDGEAETRPDKLAQLRRLTE RLATSERGGRARASPRADSPDGLAAGRS EGALQVLDGEVGS LDGTPQTREVAAEA VPETREAGAAQVPETREAGVEAAPETVE ADAWVTEALLGLPAAAERELELLRASLE HQRGVSELLRGRLRELEEAREAAEEAAA GARAQLREATTQTPWSCAEKAAQTESP AEAPSLTQESSPGSMDGDRAVAPAGILK SIMKKRDGTPGAQPSSGPKSLQFVGVLN GEYESSSEDNTNDSGDSENGGAEPGGS SSGSGDDSGGSDSGTPGPPSGGDIRDPE PEAAEPQQAQGRCELSPLREACVAL QRQLSRPRGVASDGGAVRLVAQEWFRV SSQRRSQAEPVARMLEGVRRLGPELLAH VVNLADGNGNTALHYSVSHGNLAIASLL LDTGACEVNRQNRAGYSALMLAALTSV RQEEEDMAVVQRLFCMGDVNAKASQT GQTALMLAISHGRQDMVATLLACGAD VNAQDADGATALMCASEYGRLDTVRL LLTQPGCDPSILDNEGPSALAVALEAET GMKVAALLHAHLSSGHPDTQSGVTPLA PQTANTW
3041	11092	A	399	2	510	FLANFLCFIRD/GFHHVGDGLHLLTS*S ACLGLPKCWDYRREPLRPTSPLLSRPHQ ALCCLAFGHSAATCTCVN/SALAWAGF WNPQAPGF/SVAPAHLLTHTVSLSPMPL WATCSPGAGHEAPGLMLQDPFGPPWCS CGPVFHEKTAGCKARAFSGRVCRCQAQ ALPETGR
3042	11093	A	3990	53	364	RSKVEAGLAPEPGPLGARVGS/PGTRAR HGRPGVPAIGASIGPGCGPNEQVDEQAGP AQLQGPQGPAPRAIGFPHRLGGCKI KGDGPGVRRPGSDRLSSSSPT
3043	11094	C	3991	408	620	
3044	11095	C	3992	64	300	MDSSHSTTLXPTANPNTGLVEDLDRTGP LSMTTQQSNSQSFSSTSHGLEEDKDHPT TSTLTSSNRNDGHRWKKRPKSF*
3045	11096	A	3993	1	530	
3046	11097	A	3994	1	436	
3047	11098	A	3995	3	1009	
3048	11099	A	3996	1	2226	
3049	11100	A	3997	2	1599	QPLPGSVRHPRPVLRRLPRAQSSSSFR PRPPFAPDTMDKFWHAAWGLCLVPLS LAQIDLNITCRFAGVFHVEKNGRYSISRT EAADLCKAFNSTLPTMAQMEKALSIGFE TCRYGFIEGHVVIPIHPNSICAANNTGV YILTSNTSQYDTYCFNASAPPEEDCTSVT DLPNAFDGPITITIVNRDGTTRYVQGEYR TNPEDIYPSNPTDDDVSSGSSSERISSTSG GYIFYTFSTVHPIDEDSPWITDSTDRIPA TNMDSSHSTTLQPTANPNTGLVEDLDRT GPLSMTTQQSNSQSFSSTSHGLEEDKDH PTTSTLTSSNRNDVTGGRDPNHSEGSTT LLEGYTSHYPHTKESRTFIPVTSKTGSF GVTAVTVGDSNSNVNRSLSGDQDTFHPS GGSHTTHGSESDGHSHGSQEGGANTTSG PIRTPQIPEWLILASLLALILAVCIAVN SRRRCGQKKLVINSGNGAVEDRKPSGL NGEASKSQEMVHLVNKESSETPDQFMT ADETRNLQNVDMKIGV

3050	11101	A	3998	245	1148	FPGSTPTPFAPDTMDKFWHAAWGLCL VPLSLAQIDLNITCRFAGVFHVEKNGRYS ISRTEAADLCKAFNSTLPTMAIQMEKALS IGFETCRYGFIEGHVVIPRIHPNSICAANN TGVYILTYNTSQQYDTYCFNASAPPEEDC TSVTDLPNAFDGPITITIVNRDGRYVQK GEYRTNPEDIYPSNPTDDDDVSSGSSEAR ESTSGGYIFYTFSTVHPIPEDSPWITDS TDRIPATRDQDTFPPQWGFPLPLHGSEFR WDTMGSQGRWEQTQPLGPIRDTPN SQ NGLIHLGHPLALGL
3051	11102	A	3999	3	327	AGPGEVAGDGRDSGGPAGGRRCLWNW SSGSKSLRKGNPSVSIYCFCLPNHYLFDR N/SCLRSSAGTKSGSYPPQISSMLLIVPP CVPQQTHPGLDLKTQKLSLLSALI
3052	11103	B	4	3508	3762	MTPGVVHASPPQSQVRVPRQAPCEWAIRN IGQKPKPNCHNCGTHIGLRSKTLRGTPN YLPIRQDTHPPSVIFCLAGVGPGLPV*
3053	11104	A	40	25	412	IQARKKQQSVLGIKTEDQGTFFNLLRKG MDIEAYLERIGYKKFTSKLDFETLTDILS HQIPAVSFDNLTVLCGDAMDGLGLEAIFD QAVR*NRGGWILQVNHLLYWALTTIG YETTKIGRYGYQTPAEK
3054	11105	A	400	249	434	IVEYRGMWDYRLLFFFPETESCSVAQVG TQWHDLSLQPLSPGASSNSPASAS*VAGI TGT
3055	11106	A	4000	8	280	SAQMAVTTADPRVRPRVRTTVFTSIAHT DTMVHLTPVEKSAVTALWAKVNVNVEV GGEAPGGQGCWVVLPLGPPKGPLKPFGGI CPNSLNAG
3056	11107	A	4001	405	647	
3057	11108	A	4002	405	606	
3058	11109	A	4003	1	849	
3059	11110	A	4004	2	1173	PQQSPECVPLPVSVCSHWSIPTSHRLLR VLVTVECELYVRWPCNADLTCTKAVQ NGWDLKVP TCLHLLAVPGVGLFIDEG VKQGFVETFRDTRGVLVHGCIMSCLCN NRVRPYLGKKQKSKKTTDVGVEVEESG RGCAAGAEVFQCMQQGSHSAAEGQES SSKVESGRHSYNLYLWVISPRTPASLQN LQILKCIRFWTWHEERFLYMLMEYVPGG ELFSYLRNRGHFSSTTGLFYSAEIIAIEY LHSKEIVYRDLKPENILLDRDGHKLTDF GFAKKL\AYRLMWKSLSEKRWVWRCG GEAKER*Q*QQFGWVPASRKVRS*SQDT CPHHRKQGRRLRTWTLCGTPEYLAPEVIQ SKGHGRAVDWWALGILIFEMLSGWVL
3060	11111	A	4005	149	1358	APPSHCLCVSVSRAEPRTORRGRAWGAS VDAAAAAAPPSEAAASRGVRLPERSGLAR RPGPECLPMEAPGAQAAAAESNSREVT EDAADWAPALCPSPEARSPEAPAYRLQD CDALVTMGTTGTFGRVHLVKEKTAKHFF ALKVMSPDVIRRKQEQHVHNEKSVLKE VSHPFLLRLFWTWHEERFLYMLMEYVPG GELFSYLRNRGHFSSTTGLFYSAEIIAIE YLHSKEIVYRDLKPENILLDRDGHKLTDF FGFAKKLVDRTWTLCTGTPEYLAPEVIQS KGHGRAVDWWALGILIFEMLSGFPPFFD DNPFGIYQKILAGKLYFPRHLDFHVK/DG ANDVNHHRWFRSVDWKA VPRKLPPI VPTIAGNGDTSNFETPEHDWDTAAPVP QKDLEIFKNF
3061	11112	A	4006	1	683	

3062	11113	A	4007	521	1163	SQDTCPHHRKQGRRLRTWTLCTGPEYLAPEVIQSKGHGRAVDWWALGILFEMLSGAFPKHVSSNASPGLQNWGRFPFFDDNPFGIYQKILAGKLYFPRHLDHFVKCQTPKEKQKTKNKVIFLHARHQKQNKTNNNNNNNKMKFIKNGANDVKHHRWFRSVDWKAVPQRKLKPPIVPTIAGNGDTSNFETYP EHDWDTAAPVPQKDLEIFKNF
3063	11114	A	4008	181	1448	APPSHCPRRSVSRAGPRTRRRERAWGASVDAAPPSEAAASREARLPERSGLARCPGPECVPM EAPGLAQAAAAESDSRKVAEETPDGAPALCPSPEALSPEPPVYSLQDFD TLATVGTGTGFRVHLVKEKTAKHFFALKVMSIPDVIRLKQEQHVHNEKSVLKEVSH PFLIRLFWTWHDERFLYMLMEYVPGGELFSYLRNRGRFSSTTGLFYSAEIIAIEYLH SKEIVYRDLKPENILLDRDGHIKLTDGFAKKLVDRTWTLCTGPEYLAPEVIQSKGHGRAVDWWALGILFEMLSGFPFFDDNPFGIYQKILAGKIDFPRHLDHFVKDLIK KLLVVDRTTRRLGNMKNNGANDVKHHRWFRSVDWEAVPQRKLKPPIVPKIAGDGDTSNFETYPENDWDTAAPVPQKDLKIFKNF
3064	11115	C	4009	3	167	MPMXAQIEEPQPIQVKTTRTNRLTQLRE QDQTQKCLCPLYNQAPRKKFLLWA*
3065	11116	A	401	532	986	PWAKLGLSCVPAWQVQVLAICRWKEVG ILDFLFFVFFFLR*SL/DSDTQAGVQWCDLGS LQTPLPGFKWFSCPSLPSSWDYRH APPRSADFCIF/M*RWGFTMLAKLVSNS* PQ/CDLPASASQSAGITGVSQCTRRNLGIF IDGTSVSDSSRT
3066	11117	A	4010	1	2195	MDPGTLQSASQGPTAINPCDYVLKRRNI QTSWQRLTPIIKWHVYILMIGPGEKEAG RNLGIFGKWTPFPKIPAKRLRESNCPVDAQEIWL PQA FREYLGRRGNGFGPGRRTCEFWEVESICSVESWELWLRQADSGDSGKC SPDACGIIDTSGLRAGHCYLTRLWHVSG RIPPSFKLHHPGVCKFPKVGGKMTTFKE AVTFKDVA VVFTEELGLLDP AQRKLYR DVML ENFRNLLSVGHQPFHQDTCHFLRE EKFWMMGTATQREGNSGGKIQTELESV PEAGAHEEWSCQIWEQIAKDLTRSQDS IINNSQFFENGDVPSQVEAGLPTIHTGQK PSQGGKCKQSFS DVPIDLPQQLYSEEKS YTCDECGKSICYISALHNHQRVHMGEKC YKCDVCGKEFSQSSHLQTHQRVHTGAEK PFKCGQICGKGFSRRSALNVHKLHTGE KPYICEACGKAFIHDSQLKEHKRIHTGEK PFKCDICGKTFYFRSRLKSHSMVHTGEK PFRCDTCDKSFHQRSALNRHCMVHTGE KPYRICEQCGKGFIGRLDFYKHQVVHTG EKPYNCKEKGKSFWRSSCLLNHQRVHS GEKSFKCEECGKGFYTNSQLSSHQRSHS GEKPYKCEECGKG YVTKFNLADLHQRVH TGERPYNCKEKGKNSRASISILNHNKRL H/SPEKNPFKCEDCGKRLVHRTYRKDQPRDYSGENPSKCEDCGRRYKRRLNDILLSLFLNDT
3067	11118	A	4011	1	4559	MDGAKAFFSAVAAGFVILTCQLQWQWQHGGVHAHQLWQLASGYRDACFCVST YSSGPSEFPGLTGLNELAIDLEERKHR RKAKVWKEGGGGLRSPRQSLAFAVLA SRGTRSCHVSPYLGVS GALSSPNPHST TGAGPIPPVQRWGLPQINQKNREIAIPLT LGMSTHLRRGCKNMSRFSPLHCCTTPIS TNFTDPGSHCKGAHGDICLLIQNLKGAL PMSINRSYFNAHPLLQISEAVTFKDVAV VFT

3068	11119	A	4014	1	1387	FRAASGRETRAALGASQCLTPHPLPRVG GGGASGGGLRGAGQAWSAMSSPDAGY ASDDQSQTQSALPAVMAGLPCPWAES LSPIGDMKVKEAPANSAPAGAAGRA KGESRIRKPMNAFMVWAKDERKRLAQ NPDLHNAELSKMLGKSWNAULTAEKRP LVEEAERLRVQHMQDHPNYKYRPRRRK QVKRLKRVGGFMHGMDEPQAAAMGP EGGRVAMDGLGLQFPEQGFAPGPLLP HMGGHYRDCQSLGAPPLDGYPLPTDTS PLDGVDPDPAFFAAPMPGDCPAAGTYSY AQVSDYAGPPEPPAGPMHPRLGPEPAGP SIPGLLAPPSALHVVYYGAMGSPGAGGGR GFQMOPQHQQHQQHQQHPPGPGQPSPP PEALPCRDGTDPSQPAELLGEVDRTEFE QYLHFACKPEMGLPYQGHDSGVNLPDS HGAISSEVSDASSAVVYCNPYDV
3069	11120	A	4019	77	407	ESDGGKRKKKSRGDPSQLEEKISKGCPQ RRKKPRLYRPSNYNRAFRMRRL/ARLPT RTSPETRTQPSPHSWPERTPPPGRPP FLGAGQLQRLFMGIPQVGDCPPSS
3070	11121	A	402	2	992	FVDAAGCPLRCSVVTGIVVLQKSGNRPE DLRAAQLPGRLELLNNFCSAMSPAPDA APAPASISLFDLSADAPVFQGLSLVSHAP GEALARAPRTSCSGSERESPERKLLQG VLWTISEKLCSTCDQTFQNHQEQREHY KLDWHRFNLKQRLQGQPLLSALGL*KA ELHRRSFPAFSGIRRIQDSASEEDLQTL RERATFEKLSRPPGFYPHRVLFQNAQGG FSLCLPLCPR/LLIRIPQKRQNLTLTRTLQS RGPRDCVVLMAAAGHFAAIFQGREVV THKTFHRYTVRAK/QGHSQGAFG/NARG GPSHSAGANLRVRYNEATLYKVS
3071	11122	A	4020	20	463	
3072	11123	A	4021	572	1594	SSDWKRTMSWIKEGELSLWERFCANIK AGPMPKHIAFIMDGNRRYAKKCQVERQ EGHFTGFKQLAETLRWCLNLGILEVTYV AFSIENFKRSKSEVDGLMDLARQKFSRL MEEKEKLQKHGVCIRVLGDLHLLPLDLQ ELIAQAVQATKNYNKCFNLVCFAYTSRH EISNAVREMAWGVEQGLDPSDISESL DKCLYTNRSPHPDILIRTSGEVRLSDFLL WQTSHSCLVFQPVLPWEYTFWNLFMAIL QFQMNHSLVQKARDMYAEERKRQQL RDQATVTEQLLREGLQASGDAQLRRTRL HKLSARREERVQGFLQALELKRADWLA RLGTASA
3073	11124	A	4022	2	365	
3074	11125	A	4023	1	464	RRWRICSTWTRSFATAWLPPAPSANFPR TDRSQGDRGAPAGFALAPIEFFLWDTS SQKFLQKPHCFMHGRERAKMGRRAQQE SAQAENHLNGKNSSLTLTGETSSAKLPR CR/QGGWAGDSVKASKFRRKASEEIEDF RLRPQSLNGSDYGGDIP
3075	11126	A	4024	254	662	
3076	11127	A	4025	3	392	MKYSAIQTLGDEIDLKLLTKVLAPHEV R*VQWWQQFPGLSTLAIPINPAELPGLAL CLP*RPWNGREKVSLLREKALSLSYPA KPFLAEDDVGWDWDHLFTEVSSEVLTE WDPLQTEKEDPAGQARHT
3077	11128	A	4026	63	779	GPIRGPWGPGFGGWGGATPPAPTSLRRL RAAGLAPRRRAKMGRRAQQESAQAEN HLNGKNSSLTLTGETSSAKLPCRQGGW AGDSVKASKFRRKASEEIEDFR/LRPQSL NGSDYGGDIPNPDLEEVQEEDFVLQVA APPSIQIKRVMTYRDLADNDLMKYSAI QTLDGED/IDLKLL/TPKVLAPHEVRE NPSWQDDVGWDWTHLFTEVSSE/VSFT EWDPIQTEKEDPAGQARHT

						EWDPLQTEKEDPGGQ\ARHT
3078	11129	A	4027	2	311	
3079	11130	A	4028	1	136	
3080	11131	A	4029	2	170	
3081	11132	A	403	2583	3827	DRVSLLLPRLECNGAILAHCNLC/SGFK *FSCLSLPSNWDYREVPPHQLIFVFLVE MGFHHIAQAGLELLTS/SI/PPTLA/FPKC WDYRR/DHHAWLFFFCSENSFTLLPRLE *GGLISDHCNLRLLGSSDLPASASQ\EPRL QACATT\PR*FLYFW*RRGFTMLARLVN S*PQV/HPPASASQSAEII\GVSHHTWPQEV FLFLNLFYLRWSLALSPRECS\DGISAH CKLRPPGSS\ILLPQPPE*LGLQAPATT\PG* FFCIFS\RDGFSPC*PGGS*SPDLVICLPRPP KVLGLQV*ATTPGYFYFFETGTHSVTWA AVQWYTIAHCSLELLSSSDPPTSSSQVIG TTGAPHHAHLIYLFYLFIFIEMRVPCVV QAGLELLSSRD\FAWASQSAEITGMSHR AQLGIIFKAPRMSV
3082	11133	C	4030	64	276	MCKALGTPYSPQQRLGTEASSVHRTC WHLLGQGSAA\XXXXXXXXXXXXXXXXXXXX XXXXXXXXV\SIDPTTQ**
3083	11134	A	4031	3	295	
3084	11135	A	4032	3	279	
3085	11136	A	4033	3	392	RIRHEAAAKGAA\MSAHLQWMVVRNC SSFLIKRNKQTYSTEPNNLKARN\SFYRN GLISPARLWGVEPA\ADGKGVV\VVNKR RSGQR\KPA\TSYLRTTINKNARATLSSIR HMIRK\NKYR\PD\LAHG\HAGI
3086	11137	A	4034	2	562	VAAAKGSRRQCLRH\QWMVVRNCSSF LIKRNKQDPTALSPNNLKARN\SFYRNG\I LIHRKDCGTWSRSADGK\GVV\VIK\RR SG\QRKLATSYVAGPPSTRNARSHASGR HQ/VHIDPARNKLPP\PTCRM\GSPFRR\AQ PFLAQAGRLVDWLKEGRRDPAPRSSLK PLGPQKQLKSAGVFSK\K\K\K\KSR
3087	11138	A	4035	1	139	
3088	11139	A	4036	1	299	VGIW*PVTNFGVISG\TKA\IEMD*G/TPYIH ALTNGLLTVEAPHK/ERIALKPGYK\YLS INSDELVV/GRSDAIGPREQWEPVFQNDG HPVMRMNSLQ\KATI
3089	11140	A	4037	796	911	AMA*YSYVKSSKLVLKGT\SKKKK\STDK KRKREDEETQLD/IVGIW*TVTNFGEISG TIAIWNGRKGT\YIHALDNGLFTLGAPHK /ERIALKSGYGK\YLGINSDGLVVGRSDAI GPREQCEPVFQNGKMALLASNSCFIRC N EAGDIEAKSKTAGEEEMIKIRSCAERETK KKDDIPEEDKGNVKQCEINYVKKFQSFQ DHKLKISKEDSKILKARKDGFLHETLAL DRAKLEAD\RYCK
3090	11141	A	4038	193	754	EPSRGVWPHEDARINGSK\K\K\K\KSKKRR KREDEETQFD/IVGIW*TVTNFDEISGTI AIEMDEGT\YIHALDNGLFTLGAPHKEGK MALLASNGCFIRCNEAGDIEAKSKTAGE EEMIKIRSCAERETK\KDDIPEEDIGNVK QCEINYVKKFQSFQEHKLKISKEDSKILK KAQKDGFLHETLLDRGP

3091	11142	A	4039	213	919	YVQSLKQILS/GCI*ESIAIKKKKNKDKKR KREDEETQLDIVGIWWTVTNFGEISGTI AIEMDKGTIHALDNGLFTLGAPHKEVD EGPSPPEQFTA/VKLSDSRIALKSGYGKY LGINSDDL VVGRSDAIGPREQWEPVFK MGKMALSTSNCFIRJHEAEDIEAKSKT AGEEEMIQGSP*SSVQPFHLLWTFILF QEHRSLLLKIRSCAERETKKKDDIPEEDK GNIKQCEI
3092	11143	B	404	1	336	MGRARWLT/VIPALWEAEAGGSREVEE YMGAEAVKSWTSSMFKEWDEKVRREK TSSRRARAAQCGGVFESPEYVHLLKVFL EDLDKQQQTNSKASRRQEIHKIRAELEIK T*
3093	11144	A	4040	802	1463	AEATALENPLEESRPHEARINGSKKKK SKDKKRKREDEETQFD/IVGIWWTVIN GGISGTIAIEMDEGTIHALDNGLFTLGA PHK/ERIALKPGYGKYLINSDELVV/GRS KAIGPREQWEPVFQNGACAAGFTVIGSE KQSECSSLRESRAKYHGCTHQISSSLK QHPRWMYSHQEDLKVWSLVEKKVTFE HIYLLKRNNSHHSIAEAMYGRLSNYI
3094	11145	A	4041	879	1051	GGARYHFFFFFFFDGACSVTQAGVQWP ILGSLQPPPPRFKQFSLSLPSSWDYRRD
3095	11146	A	4042	125	1366	RDSSSTLSHKSACACGFFPSTHKSCTF RFTSVRCLKYKSAKSFLHIGYREAAVWC CQRLVPCTRTQESSLDFATNLQHSAWS RLCRRGASRTSSAARSRSRSPAVEGCNR SPGAPQAPRARRRPSRGAPGRAMVKV AFNSALAQKEAKKDEPKSGEALHPPD AVAVDCKDPDDVVPVQRRWCWCM CFGLAFMLAGVILAGGAYLYKYFALQPD DVYYCGIKYIKDDVILN/ESPSADAPAA LYQTIEENIKIFEERRSLNFISVPVPEFAD SDPAKIVQDFNQETYPYLDNFLDKCY VIPLNTSMCYATPKTLELLINIKAGNLF ALSPYLDMSMRHMGYLLDRINENIDHPGF FIYRLCHDKETYKLIQRRETIKGIQKREAS NCFAIRHFENKFAVENLICS
3096	11147	A	4043	42	557	QAGKLRPGGLDSRSRSSAAGLDRDQGL HRVAFLPKRRTGGTRMDRSATAATAPP AAPAGEGGPPAPPPNLTSNRRQQQTAAQ VDDVVDIMRVNVDKVLERDQKQSELDD RC/ADALQAGASQFETSAAKLKRYW WKNLKMMLILGVICAILIIVYFQHLNP RGVCPA
3097	11148	A	4044	178	731	SSERCHQOVFIPMPALPPGFSQAGSCVP TGSSLVLACLLAASLLLFVPTLALLTGATT CWCLHNKRLAV/RRPLAWAGAFGLVS TRLIHGRISFYFNSLP/LQTNSSCTQNH SWDSGGRGDLWPPLAAPRRVGLDLCS QAHTCQQGADWIHALLCLMGVTGVPTA LPAKHLEQNTSPFVVDAE
3098	11149	A	4045	3	155	
3099	11150	A	4046	100	448	WWEVKGMSHGQKNKQEGGAHFRACV CVMESHVTRLECSGAISAHCNLRQGS SNSPDSASRVAGTTSTRHEAQLIFVFLAE TGFFHV/GQAALLELTSSDPPTSASQSAD MLYK
3100	11151	A	4047	151	461	RLTAAATASLCPLRPVTRLPLSRGSKM KEGMSNNSTTSISKPRKAVEQLKMEAC MDRVKVSQAAADLLAYCEAHVREDPLI IPVPAENPFREKKFFCTIL
3101	11152	A	4048	1	447	
3102	11153	A	4049	553	1938	
3103	11154	A	405	2	313	FFFFLRRSLALSPRLECSGVISAHCKLRP GSR/RFSLSLSHSWDYRRPPRPANFLY FLVEKGFHCVSQDGLHLLTS/AIPP/TS/F

						PKCWDYRCDSMNFLMVSKD
3104	11155	A	4050	303	478	DCTSRPSLCPLSARCDVHGLSPGPELVR* GLIVIEDALPKSHSGGRGEVRQPWDFCG A
3105	11156	A	4051	458	964	DPRTMNLAIISIALLLTVLQVSRGQKVTSL TACLVDQSLRLDCRHENT/SAVSPIQYEF SLTRETKKHVLFGTVGVPEHTYRSRTNF TSKYNMKVLYLSAFTSKDEGTYTCALH HSGHSPPIASSIQNPVFRDHGVKICEGSL LAQNASWLLALLLSLSLLQATDFMSL
3106	11157	A	4052	411	557	YSTDELPNIKISTSGRLQWLMSIIPALWE A/EDQAGRSFEFRNLRLVWTT
3107	11158	A	4053	508	1220	PLPPAATPCPKKQLGSQAWACRAARGA EQGVWGWWRKHPAPSRGRVDKGSTKQK DPSAHTTSTLNYQMHSCH/KRRHTHT HTHTHTHTHTHTHQHNIPGGPSPDQE EAGQVVEKKAANPSHNPTLQDRRVSSIL SCCKRKLEAPSPEQISMVGPGRSNLWFP HWQRRQEPAKCSFGLKEQWGGDFSRM NRLMGPGVNPSTSFWSRKLHGKDVR CWLHRHAKCLSARCPRIWRVW
3108	11159	A	4054	1609	1807	DRVWLLPRLEYSGMVSAHCNTHLLGSS QSPTSASQAAGTTGAHHYVPQLVYIYIY JLGLVETRFR
3109	11160	C	4055	169	297	MILEFHXXXXXXXGGGRFKEPLGGPNLP GAGKVLFFSLWGAD*
3110	11161	A	4056	270	614	PFKFILTQVIRDPLFSSEPYLGEKANHPP GFHHVKGQQASHVCKTHPAPSCPP/PDC CLPCPSLGPAPHFRGCCEMEFPCKNFR LDPFYLDNIFRFFCSLVTPGGKEIARTFF
3111	11162	A	4057	637	890	TKWAGSIVYLSFSFLHMFMSFLLL/STF LALCMLILVVLFLKLPPKLFSELPLKL TFLPCELLHLHLLFQDLAYFFFNGLRK
3112	11163	A	4058	3	297	ATAARPCPLGRRAGESRGPGHIGVRPG STLCQIIATCHMSVNDGGCKYVLCRWE KRLWPAKVLARTATSTKNKRRKEYFLA VQILSLEEKLSVVL
3113	11164	A	4059	2	1940	CPGLGRRAGESRGPGHIGVRPGSTLCQII ATCHMSVNDGGCKYVLCRWEKRLWPA KVLARTATSTKNKRRKEYFLAVQILSLE EKIKVKSTEVEILEKSQIEAIASSLASQNE VPAA/PLEELAYRRSLRVALDVLSECSI WSQESSAGTGRADRSRGKPMHVSSPC DSNSSLPRGDVLGSSRPHRRRPCVQQSL SSSFTCEKDPECKVDHKKGLRKSENPRG PLVLPAGGGAQDESGSRIHKNWTLASK RGRNSAQKASLCLNGSSLSSEDDTERDM GSKGGSWAAPSLPSGVREDDPCANAEG HDPGLPLGSLTAPPAPEPSACSEPGECPA KKRPRLDGSQRPPAVQLEPMAAGAAPSP GPGPGPRESVTPRSTARLGPPPSHASADA TRCLPCPDSQKLEKECQSSEESMGNSM RSILEEDEEDEEPPRVLLYHEPRSFEVGM LVWHKHKKYFPWPAVVRVSRQRDKKA SVLYIEGHMNPCKMGFTVSLKSLKHFD KEKQTLNQAREDFNQDIGWCVSLITDY RVRLGTWGAGEGWSWAAGVQPLKTPW TGWAGAAWRRGIFPWA WGIPCGWAGV LAWPDYFLNRDAGPAPGTHFLGLLLGLH SALSPPPPAGCGSFAGSFLEYAADISKS TGCI

3114	11165	A	406	4565	5027	LIGYILFCFFFFFFFLRQSLVLLPGLECSG VILAHCNPR/LPGFK*FSCSLPSSWNYR HAPARPIVSFVFLAEMGFHHIGQAGLKL LT/SV/IPPTSA/FRKCWDYRREPPRPTAF FVLNKFTVLGSNSGF*T*DRHINHFMRLY CNYTLEYSGSHL
3115	11166	A	4060	1	2722	MERPLRGSRHPRLPVPPGVLGPSQGHIG VRPGSTLCQHATCHMSVNDGGCKYVL CRWEKRLWPAKVTAII/RVTSGLRNDFR VTKTSVTGPSILKYLVEFVTLNQRLTFK RQITDDQAAHCSAPIKVKSTEVEILEKSQI EAIASSLASQNEVPAAPLEELAYRRSLRV ALDVLSEGSISQESSAGTGRDNRSRLRG KPMHEVSSPCDSNSSLPRGDVLGSSSRPH RRRPCVQQSLSSSFTCEKDPECKVDHKK GLRKSSENPRGPLVLPAGGGAQDESGSRI HHKNWTLASKRGGNSAQKASCLNGSS LSEDDTERDMGSKGGSWAAPSLPSGVR EDDPCANAEGHDPGLPLGSLTAPPAPEPS ACSEPGECPAKKRPRLDGSQRPPAVQLE PMAAGAAPSPGPGPGPRESVTPRSTARL GPPPSHASADATRCCLPCPDSQKLEKECQ SSEESMGNSMRSILEEDEEDEEPVLL YHEPRSFVGMVLVWHKHKKYPFWPAVS WDESTRGWISRLKAAFRTIALHIPKSNAQ NRCHLTSPSLRVPGAHLRSDQPKPSGPR CPPAFRPAQAIGSPVPTCVQISPSHRVPG AHLRSDQPKPSGPRCPPFEQLRAQTCAW CVSHLPEGPCARRLPEPPLSGRNQAREDF NQDIGWCVSLITDYRVRLGCGSFAGSFL EYYAADITSRACPGALIPWATSSVLLW LVAAHIRCCEECRPGASFAGYPVRKSIQ QDVLGTLKPQLSKGSPEEPVVGCPGQR QPCRKMLPDRSRAARDRANQKLVEYTV KAKGAESHLRAILKSRKPSRWLQTFLLSS QYVTCVETYLEDEGQLDLVVKYLQGVY QEVGAKVLQRTNGDRIRFILDVLLPEAI CAISAVDEVYKTAEEKYIKGPSLKLPG KRNI
3116	11167	A	4061	57	235	
3117	11168	A	4062	754	1767	WTSWWMSVLTILLFSLQGNKMLNYS PSAGGCLDRKAVGTPAGGGFPRRHSVT LPSSKFHQNLSSLKGEPAPALSSRDSR FRDRSFSEGERLLPTQKQPGGGQVNSS RYKTVELCRPFEENGACKYGDCKQFAHG IHELRLTRHPKYKTELCTFHTIGFCPY GPRCHFHNAEERRALAGARDLSADRPR LQHSFSFAGFPSAAATAAATGLLDSPTSI TPPPILSADDLLGSPTLPDGTNNPFAFSSQ ELASLFAPSMGLPGGGSPTTFLFRPMSES PHMFDSPSPQDSLSDQEGYLSSSSSSHS GSDSPTLDNSRRLPIFSRLSISDD
3118	11169	A	4063	568	715	
3119	11170	A	4064	65	347	GLPAPLPPP/PPRSLPFPAPGLRSQRFSTSA PPRHARPPPVARARAAPHPQASGRKSQ VSAPLVERAPLRAPGLTATAVVTVLGDP ACAFPLEM
3120	11171	A	4065	1648	1974	KVFFCFYRIYVCICVCVCVCV/TLQTL/C YSIANMLTSSQCLQSCGSQSWCQMHKS SKAJMTIPCKFISRKPWEGDCSSLEPHGV SAFDIWWPQLCIKKVLNHFSPRKN

3121	11172	A	4066	12	1662	FLRGGCCFCYMTQRPRLPTALLPERS VPPLPPAAPPRPVRHPPVAAPPARRCPAP APPPPPPPDDWVMLDMGDRKEVKMIPK SSFSINSLVPEGLQNDNHHASHGHHNSH HPQHSHHHHHHHHHHPPPAPQPPPPRAA QQQQPPPPPLAPQAGGAAQSNDEKGPQL LLLPPTDHHRPPSGAKAGGCCRPGEGLP VGPDEKEKGAGAGGEEKKGAGEGGKD GEGGKEGEKKNGKYEKPPPSYNALIM MAIRQSPEKRLTLNGIYEFIMKNFPYYRE NKQGWHSIRDNLNLNKCFCVKVPRHYD DPGKGNYWMLDPSSDDVFIGGTTGKLR RRSITTSRAKLAFKRGAAALTSTGLTFMD RAGSLYWPMSPFLSLHHPRASSTLSYNG TTSAYPSHPMPYSSVLTQNSLGNHNSFST ANGLEAWDRLVNGEIP/YTATHHTAA ALAAVSPCGLSVPCSGTYSLNPCSVNLL AGQTSYFFPHVPHPSMTSQTSTFMSARA ASSSTSPQAPSTLPCESLRPSLPSFTTGLS GGLSDYFTHQNGSSSNPLIH
3122	11173	A	407	187	741	TRGTSARTGRSSGIASMASGILVNVKE EVTCPICLELLTQPLSLDCGHSFCQACLT ANHKKSMLDKGESSCPVCRISYQPENIRP NRHVANIVEKLEVKLSPEGQKVDHCA RHGEKLSIFCOEDGEGSFCWVC*AVFR EHRGSPHVSSQRRFAREYQVKLQAAL MLRQKQQAEELEADIR
3123	11174	A	4070	1	507	
3124	11175	A	4071	259	1409	FLLWRYFVFGIVTEEEKVQPTVYLIQLL DLLKAIT/SPHLEAGSKPSKKTGEKSSGS SSHSESKKEHHRKKVSGSSGELPLEDGV SHKSKKMKPLYVNTETLTLREPDGLKM KLILSPKEKGSSSVDEESFQYPSQATV KKSSKKSARDEQGALLGHELSFLKTA RKKHKSSDAHSSVGPLKGLGLDAISQ FRKSPHSANLDLSGLEPILVESDSSSGGE LEAGELVIDDSSREIKKKKSKKSKKKK DKEKHKEKRHSKSKRSLGLSAVPVGEVT VTSGPPPSIPYAGAAAPPLPLPGLHTDGH SEKKKKKEEKDKERERGEKMGPSWKK ISSGLPLILHDGPWKNCFRNRYVPVKRL RTADLVGLYLGSQKHK
3125	11176	A	4072	436	2063	RRREVEGWYFGGFSHRRTVCICDTPDISS LESSQKKKKKSSPQSTDTAMDLLKAITSP LAAGSKPSKKTGEKSSGSFKAISGELKR EHHRKKVSGSSGELPLEDGGSHKSKKM KPLYVNTETLTLREPDGLKMKLILSPKEK GSSSVDEESFQYPSQATVKKSSKKSAR DEQGALLGHELSFLKTARKKKHKSSSD AHSSPGPEGCGSDASQFAESHSANLDLS GLEPILVESDSSSGGELEAGELVIDDSYR EIKKKKKSKKSKKKKDKEKHKEKRHSK SKRSLGLSAVPVGEVTVTSGPPPSIPYAG AAAPPLPLPGLHTDGHSEKKKKKEEKDK ERERGEKPKKKNMSAYQVFCKEYRVTI VADHPGIDFGELSKKLAEVWKQLPEKD KLIWKQKAQYLQHKQNKAEATTVKRK ASSEGSMKVKASSVGLSPQKSPPTT MLLPASPAKAPETEPIDVAHLQLLGESE SLIGHRLQETEGMVAVSGSLSVLLDSIIC ALGPLACLTQPLNGCPKQVLSNTLD NIAYIMPGL
3126	11177	A	4073	323	539	PFMICLVHFCAPGNPPSARPRSPSPRCH PCAPQEGKMTHPQFRVMPAPSCYNWLL ENVFPIIQNSGVRIS
3127	11178	A	4074	27	425	GGGSGPRAPSATLLDTGESVAAVASGED KGIAASAAAAAVFACSCSPDPQSSTMNP VYSPVQPGAPYGNPKNMAITGYPTAYP AAAPAYNPSLYPTNSPSYAPATLVMKQ

						AWPQNSSSCGTEGTFHLPVDTG
3128	11179	A	4075	1	434	
3129	11180	C	4076	117	251	MVPGPSLQNSWQASFNIPWPALPKPDLG PSPSVSPVDIFCGACC*
3130	11181	A	4077	58	313	SSKQKNPKESKTTKQNQIYTSYTQARP WGFPIFTPGLCFENTYKFFDQTTWKTLV KSSSSSSSSSSPILFLFKM*VPIKFKN
3131	11182	A	4078	1	279	
3132	11183	A	4079	54	946	GGSGPRAPSATLLDTGESVAASGED KGIAASAAAAAVFACSCSPDPQSSTMNP VYSPVQPGAPYGNPKNMAYTGYPATYP AAPAYNPSLYPTNSPSYAPFQFLHSA YATLLMKQAWPQNSSSCGTEGTFHLPV DTGTENRTYQASSAAFRTYTAGTPYKVPP TQSNATPPPYSPSPNPYQTAMYPISAYP QQONLYAQGAYYTQPVYAAQPHVIHHTT VVQPNIPSATYPAPVAAPRTNGVAMGM VAGTTMAMSAGTLLTTPQHTAIGAHVPS MPTYRAQGTPAYSYPVPPHW
3133	11184	A	408	1234	1337	TRGPRGPADSCRKAWSEKAWQRGWWS WCPAAGASGGCGPLHPWLW/PPEPWVE RATPT*GPCSRTPAPGSPLPGFLRPLPA AVCRPPGSPCSETVLF*EAE/PT/P*APVRI GGTFQPCAVLLPARMKVVQSSTVR*/VT VTRLPVQKVEVAGGWPGSHEKTLP/AA/ PAWGLDRKPLQAPRSQKPPNPQGTAE GQRWAHRYKCCFVSLTPCSSQLPVP*DL ASKG*PSHT*ILGSF*DLCLPA*PMLQGPC PQPLSAP*VFLFPLS*V*GALIGPFLARPF SRGQLP*AWATPPWPS*PLAK/SPPDVAC SLVPGPSFSPSHPSAPVVEPHL*APGALN VLSPLDLMCIPSPASYVAAKAPQAVNGG SCHTSLPELT*PAPATSCIGILRAGPCSLM GPPRPVKPW*RSACLGLGNSQLTPQPK TGSVPYGPSPAVAWVP/ERLPPGSPPPAP IKVLPLMQACVDHVFVWPEPPPATGGQL PF
3134	11185	A	4080	1	502	RHEGGMWRAGSMSAELGVGCALRAVN ERVQQAIVARRPRDLPSPSQRLVAV/SA KTKPADMVIEAYGHGQRTFGENYVQEL LEKASNPKILSLCPEIKWHFIGHLQKQNV NKLMDGKSEFLIKRENIMPRTELNSPFGSV IYTWEYPTSMFIIHWSFRKIKNCS
3135	11186	A	4081	171	1184	IPILIMKLLCCHKSSGDPYHLHLFAKSKH STLPFSLGLGVGPRGMWRAGSMSAELG VGICALRAVNERVQQAIVARRP/RGDLPAI QPRLVAVSKTKPADMVIEAYGHGQRT FGENYVQELLEKASNPKILSLCPEIKWH FIGHLQKQNVNKLMAVPNLFMLAETVG FCECLADKVNSSWQQRKIGSPERLKVMG PGFNTSREEIYLFVSLEGGKHGLPPSETI AIVEHINAKCPNLAEFVGLMTLGSFGHD LSQGNPDFQLLLSLPEE/ICGKKLNIPAE QVELIMGMSADFOHAVEVGSTNVRIGST IFGERDYASKKTPDKCAADVKAPEVA QEH
3136	11187	A	4086	1	265	AGNRLRFQLELEFVQCLANPNYLN/WYP QCLHMLELLQYEHFRKELVNAQCAKFID EQQILHWQHYSRKRMRLQQAIAKQQQ QNNTSGK
3137	11188	A	4087	1	987	

3138	11189	A	4088	1	491	RGFRNFARVSGLLLCQAGGVLVSSFVM AAAVAMETDDAGNRLRFQLELEFVQCY ANHNTLIFLPQR\GYFKDKAFVNYLKYL LYWKDPEYAKYLKYPQCLHMLGAAPN MEHFRKEAGWNAQCAKFIGWNRQVST LGKHYS\RKRMRLQQALAEQQQQNNTS GK
3139	11190	A	4089	55	858	EKGRARGRERRRKMQLTRCCFVFLVQG SLYLVICGQDDGPPGSEDPERDDHEGQP RPRVPRKRGHISPKSRPMANSTLLGLLAP PGEAWGILGQPPNRPNHSPPSAKGKKIF GWGDFYSNIKTVALNLLVTGKIVDHGN GTFSVHFQHNATGQGNISISLVPPSKAVE FHQEQQIFIEAKASKIFNCRMWEKVEAR GRRTSLFTHDPAKICSRDHAQSSSTWS\ C SQPFKVV CVYIAFYSTDYRLVQKVCPD YNYHSDTPYYPSG
3140	11191	A	409	89	596	IILKTGSSLCHPRLECSGVILVHRNLRLP GSSNSPASGSPVA*ITGARHHDRLIFVFL VEMGFCYVGGQAGLELLTSSDPPTSASQS AGVTGVSHCARPSFAL*F*KSA*YNLELC LFYHH*YSKCIHFHFLDYNCQNLITNIE SSLIFSILLISTFYCYLAEIPR
3141	11192	A	4090	1	368	MRARNLMTKLTVISRKEELQEEAAHR EVQSLPPGEMEERSSSKTCPCQVCDGRILS CMIKVPP/VGREKH*RPRGRSH*HEAGCG PFTPPKVDHHEHLPPRRVEAGSRQKST TEPFPQAAGW
3142	11193	A	4091	253	536	YLASLEIPQSKVPESRPSHQVPSSQSLDSE TPPSN/RHRQPPVDRKCVCRILPLPPPTF RPPKVDHHEHLPPRRVEAGSRQKSTTE PFPQAAGC
3143	11194	A	4096	318	543	KSSWSRWAFGTVRSPCGRQHRDIGATD NSGRSGPAEQRPQSS/ASSAMSAAGGSRL TFHPRNLPPRTPTQDSAALT
3144	11195	A	4097	42	342	ENEILEVVQLGSRVCVFHYHLHCCRHH CPENVHAG/CFGDCLG/HGRCSIQNCFFE R*I*VG*NNVAATAVMFGLVFLVLSLK YQVYFFKVLALMNFCS
3145	11196	A	4098	1	1289	MYERVYVSTDIAIKLCKLLNRQFDRLY KKHSTGSASGEGLKALPLIVEGEGEPC AEITRQEREEGA VHLFGLTWQLQPVGE LYANGVSKGNRGTESMDTTYSPIGGKVS DKSEKKVFQKGRAIDTGEVDIGAQVMQ TIPPGFWRFQITIHPIYLKFNISLAKDSL LGIYGRRNIPHTHTQDFVKLMDGKQLV KQDSKGSDDTQHSRNLILTSLOETGFIE YMDQGPWYLA FYNDGKKMEQVFLTT AIEIMDDCSTNCNGNCECISGHCHCFPGF LGPDCARDSCPVLCGGNGEYEGHCV RHGWKGPECDVPPEEQCIDPTCFGHGT MGVCICVPGYKGEICEEDCLDPMCSNH GICVKGECHCSTGWGGVNCETPLP/EQC SGHGTFLLDAGVCSCDPKWTGSDCSTE HKGSSRLFL
3146	11197	A	4099	1	4509	VRLEWPTDLAVNPMDNSLYVLDDNNIVL QISENRRVRIAGRPIHCQVPGIDHFLVSK VAIHSTLESARAI SVSHSGLLFIAETDERK VNRIQQVTNGEYIAGAPTDCDCKIDP NCDGSGDGGYAKDAKMKAPSSLAVSP DGTLYVADLGNVIRTISRQAHLNDM NIYEIASPADQELYQFTVNGTHLHTLNL TRDYVYNFTYNSEGDLGAITSSNGNSVH JRRDAGGMPLWLVPVGGQVYWLTISSN G
3147	11198	A	41	319	1002	

3148	11199	A	410	372	639	RAFWQYFKSLNMFMSFDPAILLIGIYPKE KS*IQK/DTLCPEVSEILLMVVKYN*YIC HTRNDQAGLIY/HLYSGIYLALK*VCEFF TLKG
3149	11200	A	4100	338	8522	SEMEQTDCKPYQPLPKVKHEMDLAYTS SSDESEDGRKPRQSYNSRETLHEYNQEL RMNYSQSRKRKEVEKSTQEMEFCESTS HTLCSGYQTDMHVSVRHGYQLEMGSVDV DTETEGAASPDHALRMWIRGMKSEHSS CLSSRANSALSLTDTDHERKSDGENGFK FSPVCCDMEAQAGSTQDVQSSPHNQFTF RPLPPPPPPHACTCARKPPPAADSLQRR SMTTRSQPSAAPAPTSTQDSVHLHNS WVLNSN
3150	11201	A	4101	139	520	LSLPLSPRLECSGTILARC�LHPSPPRSKR FSCLSLPSSWDYRRAPPNLAIFFLLFLV EMGFHHVGQTGLELLASNYLPTSA/FPK CWDYRHEPPCPADKTNFLSLWFIGYNIF LESEVNFFLPWDA
3151	11202	A	4102	7	497	
3152	11203	B	4103	93	182	PPPKALRRELPEEAAAEERRKIEVPSEIE *
3153	11204	A	4104	51	394	WGGPGLKPLLMVLDPYRAVALELQANR EPDFSSLVSPLSPRRMAARVFYLLVSV CMCVCVCGAGTORPEARTGTPTCPPLLA S*PVLSAQQILHVQKEKPYGRLLIQPGPR FH
3154	11205	A	4105	427	499	
3155	11206	A	4106	796	2482	KTRGNMFYYPNVLQRHNGCFATIWLA ATRGSRLVKREYLRVNVVKTCCELLNYV LVRVQPPQGLPRPRFSLYLSAQLQIGVI RVYSQQCQYLVEDIQHILYRLHRAQLQ MRIDMETELPSLLLPNHLAMMETLEDAP DPFFGMMSVDPRLSPFDIPQIRHLEAAI PERVEEIPPEVPTPEPERIPVTLPPEAI TILAEAEPLRMLEIEGERELPEVSRRELADL LNAEEEEAILLEIPRLPPPAEVEGIGEA LGPEELRLTGWEFGALLMEVTPPEELRL PAPPSPERRPPVPLRRRRRRLLFWDK ETQISPEEFPRNNLQTRAHCWECMVQ PPERTIRGPAELFRTPTLSGWLPELLGL WTHCAQPPPKALRRELPEEAAAEERR KIEVPSEIEVPREALEPSVPLMVSLEISLE AAEEKSRSISLIPPEERWAWPEVEAPEAP ALPVVPEIPEVPMEMPLVLPELELLLN WKTVHRAVALELQANREPDFSSLVSP LSPRRMAARVFYLLVLSAQQILHVQ EKPVYGRLLIQPGPRFH
3156	11207	A	4107	136	423	SPEHPQLPGSLLRPPGAQIPSEWQVAEAT ALVHTLDGWSVVQTMVVSTKTPDRKLI FGKGNFEHLKKELEAAWGVFDRFTV VLHILRCNARTK
3157	11208	A	4108	1	212	RPPRRVVRGRHQPHGEPVRSGAPVRVP GEDDAAQPSAAERVGPRAVPGAGFTVH QHHRGGLHRRRRLRQ*RHQPHGEPVR SGAPVRVPGEDDAAQPSAAERVGPRAV PGAGFTVHQHHRGGLHRRRRLRQ

3158	11209	A	4109	1	1746	AGRRTPGAAALPRGPRPLGSAGSRAVLP RARASRCRPQEPRESGGAVGRREGPAGG RRTKTERKTTRRSRKMRTTRPRSCCGE SLCCRRGPKRVCLVHPDVKGWPGKSQM TRAEWQVAEATALVHTLDGWSVVHTM VVSTKTPDRKLIFGKGNFEHLTEKIRGSP DITCVFLNVERMAAPTKELEAAWGVE GCLTAFTVVLQHLPA CNARTK/ERARLQ VALAGDARLHRSNLKRDVAHLYRGVG/ SRAYIMGSGESFH/MQLQQRLLREKEAKI RKALDRLRKKRHLLRRQTRRREFPVISV VGYTNCGKTTLIKALTGDAANQPRDQL FATLDVTAHAGTLP SRMTVLVYDTIGFL SQLPHGLIESFSATLEDVAHSDLILHVR DVSHPEAELQKCSVLSTLRGLRLPAPLL DSMVEVHNKVDLVPGYSPTEPNVVPVS ALRGHGLQELKVELDAAVLKATGRQIL TLRVRLAGAQLNWLYKEATVQEVDP EDGAADV RVIIISNFPYGKFRKLFRMN GRPQKACGVGASPALGELRRYPLCWGQ LGVRCRVLLVWFCTRLASQPFAGMYR ACR
3159	11210	A	411	136	251	IHQEKPPNIFSVKKRHYD*PGQHDPLASA SQSAGITGV
3160	11211	B	4110	50	382	XGEQLVRQDL DAGVSEHSGDWLDQDSV SDQFSVEFEVESLDESDYSLSEEGQELSD EDDEVYQVTVYQAGESDTSFEEDPEIS LADYWKCTSCNEMNPPLPSHCNRCWAH X*
3161	11212	A	4111	1665	1787	FFVLLVETGFHRVSQDGLDLLTS*SAHL GLPKCWDYRHEPP
3162	11213	A	4112	1431	1553	FFVLLVETGFHRVSQDGLDLLTS*SAHL GLPKCWDYRHEPP
3163	11214	A	4113	1740	1862	FFVLLVETGFHRVSQDGLDLLTS*SAHL GLPKCWDYRHEPP
3164	11215	A	4114	1	752	DL DAGVSEHSGDWLDQDSVSDQFSVEF EVESLDESDYSPSEGGQELSDDEDEVYQ VTVYQAGESDTSFEEDPEISLADYWK TSCNEMNPPLPSHCNRCWALRENWLPE DTGKDKGEISEKAKLENSTQAEFGDVP DCKKTIVNDSRESCVEENDDKITQASQS QESDYSPSTSSIIYSSQEDVKEFEREE TQDKESVESLPLNAIEPCVICO/GST*K WLHCPWQNRTSYGLLYMCKEAKEKE
3165	11216	A	4115	426	813	SSRRFVWRALLCERAQSGTVYEI*QCA HRHPRHRHPGCCRHRLGYAGTAGPLAG YRPFQHRQSLWRAASAICVDAISMRT SRSTVRPLWPPSPARFATWSHYRLRDH GDHTRPVDLPTSQFTILL
3166	11217	A	4116	1174	1354	FFVLLVETGFHRVSQDGLDLLTS*SAHL GLPKCWDYRHEPLRPAGLFKHSPGLYSQ PILT
3167	11218	A	4117	2251	2373	FFVLLVETGFHRVSQDGLDLLTS*SAHL GLPKCWDYRHEPP
3168	11219	A	4118	1027	1193	FFFFFFFFGFLVETGFHRVSQDSL DLLTS *SSRLGLPKCWDYRHEPPRAEEGI
3169	11220	A	4119	983	1386	QEVRYRKVETLRCLLFSSCLVPVCAASP VSRPGCRFLRSSLHWPTGRLVFRQGET FLVPEKTVLRGVASAPAKAAGRTPVPG RPRDARLRADARS*SC*RAARPRRGASG AVGARCGPRPGFPFLRSGGIFV
3170	11221	A	412	118	337	IHQEKPPNIFSVKKRHYD*PGQYGKTL LKIQLAGYSGTCLAKSQLRRVGREVIQL ALKIRAPIWKIECL

3171	11222	A	4120	6133	7646	YMLFLFLSTKGWTVIQNRQDGSVDfGR KWDpYKQGFGNVATNTDgKNYCGLPG NEQACKIKSFYlKWdFF*LkNIHCWKPV LGS*EEFPDKNVEAKDKGRKAVFSFpkF YFW*EILFCFSFRÆYWLGNdKISQLTRM GPTEllIEMEDWKGDkVKAHYGGFTVQ NEANKYQISVnKYRGTAgnALMDGAS\ HLMGÆENRDHDPFHNGHGSFQPPYdRD\ NDGWYVWHSLLLL*KSH*YHYSESLTIF LIATTswALTvSHCPKLFMHHSKAFQL* GRHSYSHFTDEI*RDYVICPMShNYPEIK LEFEHSYFLNNEHLdKYLYlYILKCV*KL SFSFPGFSdTKGCKSYSSIK*QTQSLDG LPQRPSYLSfLL*GTGGLWCISVTLCIAP KGKTTVHTSVAVFYG*SAKRNLTTVVLF LITPNTFSFRLTSDPRKQCSKEDGGGWW YNRCHAANPNGRYYWGGQYTWDMAK HGTDdGVVWMNWKGSWYSMRKMSM KIRPFFPQQ
3172	11223	A	4121	333	430	GRGDKPYPSPGDSWfVQD*ILVQL*ICPQ EPS
3173	11224	A	4122	2	1679	
3174	11225	A	4123	42	1465	GRWPPRGRENALSKTLVdMDMADYS AALDPAYTTLEFENVQVLTMGNDTSPSE GTNLNAPNSLGVSALCAICGDRATGKH Y GASSCDGCKGFFRRSVRKNHMYSCRFSR QCVVDKDKRNQCRCRLKKCFRAGMK KEAVQNERDRISTRSSYEDSSLPSINAL LQAEVLSRQITSPVSGINGDIRAKKIASIA DVCESMKEQLLVLEWAKYIPAFCELPL DDQVALLRAHAGEHLLLGATKRSMVFK DVLLLGNDYIVPRHCPELAEMSRVSIRIL DELVLFPQELQIDDNEYAYLKAIFFDPD AKGLSDPGKIKRLRSQVQVSLEDYINDR QYDSRGRFGELLLLLPTLQSiTWQMIEQI QFIKLFMAKIDNLLQEMLLGGSPSDAP HAHPLHPLHMQEHMGTVIVANTMPT HLSNGQMSTPETPQSPPGSGSESyKLL PGAVATIVKPLSAIPQPTITTKQEVl
3175	11226	A	4124	3	1840	
3176	11227	A	4125	6233	6874	VLIGCIPQVPPSISYSPLFWFSALGNVAEI FFCLCLGNHNSCWRTLvVEVPESLCPHC *RLLV*HKSGDIWVLTPQMLQLDPAALP CPPSSIVDAKGLSDPGKIKRLRSQVQVSL EDYINDRQYDSRGRFGELLLLLPTLQSiT WQMIEQIQFIKLFMAKIDNLLQEMLLG GPCQAQEGRGWSGDSPGDRPHTVSSPLS SLASPLCRFGQVA
3177	11228	A	4126	1	1481	GFGVGAQGRAGRRVEAGRMRLSKTL VdMDMADYSAALDPAYTTLEFENVQVL TMGNDTSPSEGTLNAPNSLGVSALCAI CGDRATGKHYGASSCDGCKGFFRRSVR KNHMYSCRFSRQCvVDKDKRNQCRCY RLKKCFRAGMKKEAVQNERDRISTRSS YEDSSLPSINALLQAEVLSRQITSPVSGIN GDIRAKKIASIADVCEsmKEQLLVLEW AKYIPAFCELPLDDQVALLRAHAGEHLL LGATKRSMVFKDVLLLGNDYIVPRHCPE LAEMSRVSIRILDELVLFPQELQIDDNEY AYLKAIFFDPDAKGLSDPGKIKRLRSQV QVSLEDYINDRQYDSRGRFGELLLLLPTL QSiTWQMIEQIQFIKLFMAKIDNLLQEM LLGGSPSDAPHAAHPLHPLHMQEHMGTV IVANTMPTHLsNGQMCEWPRPRGQA ATPETPQSPPGSGSESyKLLPGAVATI VKPLSAIPQPTITTKQEVl
3178	11229	A	4127	602	799	ENPKQQENLWSQYFTLISTI*KKKSWLCI VAHADCSSTLGD*GGHIA*AQEFETSVG NIVKPPSLY

3179	11230	A	4128	646	1905	
3180	11231	A	4129	6717	7569	
3181	11232	A	413	160	437	KRDITTSLGQYGQNP ⁵ SLLKIQILAGYSG TCLKSQALRRRLRHQNRNLN ⁶ GGRGVGSE QRSCHLHSWGGHSETVSKKKKKRERQQ WRQIGTCMP
3182	11233	A	4130	2	93	DFTMSHHYHSAHGTLVLAPRALGNPLSL YPSNYTFPFQHS ⁷ SDPCTQSYSLPPEYAT HGSSCFD ⁸ TTD ⁹ GLNASRALAGSCAPVSG SLPCCPTLGIPSPPLPHMHKSLPTYPPTPTI SMKPP ¹⁰ PCPGSQGPWQSAFTLPI
3183	11234	A	4131	743	955	ESDFTEYFTHNSCLFCYNKIYINITYIKLSL NCNYGNYFLYIVAAHTQTYIYI ¹¹ *NIFCFF CHLLLTFC ¹² LG
3184	11235	A	4132	49	313	PLRIWPC*ALFLKLSL ¹³ GFSLF*FYSSLL SPPLC*SLPRVQYIYMYLYICICN*YTYI QVCICNGYMYSCSWCSNVWYGYTENM RT
3185	11236	A	4134	508	780	VSFSSFPSPFPHLSL ¹⁴ FFSLSFSFPSPSLFPSS FTFFGNHLL*ISCNPNLMYQWGIFKYK YYQCIFWLLSDF* ¹⁵ LKYNENDMSVAFGLR TSL
3186	11237	A	4135	34	329	DRLKRKNQSLSYLWEYNKKS ¹⁶ NICVTQ SLEREEDDRAEKVVE*IMASNFPYLSRD VNLKIQDS* ¹⁷ RILNWIKLKSISKYIIDLLE TKDIIRNLESSQR
3187	11238	A	4136	582	869	MCQRVQTPKSPSNPYVHSNICTQLFIAPL SIIAKRWKQPKCP ¹⁸ SAEE*INEM*YIHSME YDSA ¹⁹ IKRNEVLHVTTWKNFENIRLMKD ASHKGLYVA
3188	11239	A	4137	285	346	AVLFYVFH ²⁰ IPYLLVMTLLLYFLP*LPNQC RFSSLSH ²¹ SKTTAWPSTTVTLF
3189	11240	A	4138	97	298	DNLTL ²² LPRL ²³ ECGGMIMAHCSLNLTFSSD PAASAS*VAGTTGT*HHA ²⁴ WIFVLCNWL RNRGVT ²⁵ VKKRS
3190	11241	A	4139	147	502	IFH ²⁶ SKMPISEWKL ²⁷ V*TLWQFFKELKIELP FDPAIPL ²⁸ LGI*PKLAVVAPQHS
3191	11242	A	414	2	150	WLPSLLE ²⁹ PLHPSNHVQGP ³⁰ AVGIDLGTT YSCVPIGNRTTPSYVALRPG
3192	11243	A	4140	435	660	NLNQHEKLSMLE*ILKSYPKILD ³¹ NINDHE VSHCSKGNNFKNRSKEWWCGTQDSWR LGNLKVGE ³² EEFN ³³ DLTRNTL
3193	11244	A	4141	293	563	NVWPSSSVRGRNE*GREGRRRTQQA GLGPAPSDLWWLWLSWCLQKNMSQGG ENLPAGPGSCCGREAQEGAGTSLEDAPF FEAQLQLH
3194	11245	A	4142	1329	1563	WPRNQPTRRPWLKDKLP ³⁴ GVPGGLTGPN PCGQGP ³⁵ PGPPPLRPSALWSSHSGPPNG EPLPRGE*YLHPS ³⁶ PRRTSYL
3195	11246	A	4143	304	589	RTWWTAASYFRSVGGSASNR ³⁷ PFSIPGPY EFQLPRGHSRKGTT ³⁸ RSRAREPSTLWSTP AAP*RTWWTAASYFRSVGGSASNR ³⁹ PFSI PGPYEFQLPRGHSRKGTT ⁴⁰ EEQSOGAIYT VEYACSAVKNLVDSSVYFRSVEGLLKQ AISIRDHMNAS ⁴¹ AQGHR
3196	11247	A	4144	131	690	VSPAVTTSSSLSWARSDLA ⁴² AE ⁴³ G ⁴⁴ HARCPL CSGWAQHLSNEEADALSPHTRPIPTTCI* SRTSSLR ⁴⁵ ASTSWPTSHWPCTGCRSMCV RSLPELAQHKA ⁴⁶ DNAALGRS ⁴⁷ RAREPSTLW STPAAP*RTWWTAASTSA ⁴⁸ AWRVCSNRP SASGTILNASCPGPQVAPGDRPPPLP ⁴⁹ PSL QG ⁵⁰ PSLSCAGEPLLLAY
3197	11248	C	4145	332	421	MEEKIFSQPGMV ⁵¹ APTCNPSTLGGQGRWI T*
3198	11249	A	4146	685	929	KVGGAKPSLGYLRLGLR ⁵² LPVFCLHIS*A GDFPRGV*LLPRRGSGVVAHTCNPSTLG GQGRQIT*GQEFKTGPVNMV ⁵³ KPHLY

3199	11250	C	4147	710	892	MCVCAHTCPQTSIYIHVFTHGYDCIQVT AQKCLHMCFFHHMSTHACVDTYICIYIH VKLI*
3200	11251	A	4148	98	317	
3201	11252	A	4149	656	1037	FVQVQAHKLACKHVQGAYFVFKEQQPE GNVFRCCQGVSTS*EHGASSEPWHPAGA GVTTSSFPSPSGGDRHKFEVSGRRLPTEG LPSNSSFESFPSSIPWPFLFPQVQLSTIWG LKFQFFGDLKILP
3202	11253	A	415	1	1786	MCLLVITYSSRHVYNNLTTEEQKGRVAFA SNFLAGDASLQIEPLKPSDEGRYTCKVK NSGRYVWSHVILKVLVRPSKPKCELEGE LTEGSDLTLQCESSSGTEPIVYYWQRIRE KEGEDERLPPKSRIDYNHPGRVLLQNL MSYSGLYQCTAGNEAGKESCVVRVTVQ STMFGQTLQLGIDLTTYS\CVGVFQQR KSPRLIAN\DQGNR\TPSYVAFTGH*TG WIGDAAKNQVAMNP\TNTVFNAKRSD LDGRF*MNAVCPVLIMKHVALYVWGE MMLGRPQGP*KDYKGEDQKAFYPEEGC LLWVPDKD*KEICRSPNLGEELVTNAVIV TVPAYFND\SRQATK DAGTIAGLNVLR IINEPTAAAIAYGLDKKVGAEARNVLIFDL GGGTFDVSILTIEDGIFEVKSTAGDTHLG GEDFDNRMVNHFAIEFKRKHKKDISENK RAVRRLRTACERAKRTLSSSTQASIEIDS LYEGIDFYTSITRARFEELNADLFRGTL PVEKALRDAKLKDSQIHDIVLVGGSTRIP KIQKLLQDFFNGKELNKSINPDEAVAYG AEMRQDKKELLLDPIAEDFLEEVAFDCK RMGFGGF
3203	11254	A	4150	1365	1503	LKTLQRAGCSAHACNPSTLGGQGRWII* AQEFNTSLGNVAKPCLY
3204	11255	A	4151	397	682	YSKSKCHAYRMKCQLNVGLSCKCCECT EWRDPCELEGQESLWGQVQLAHACNPN TLGGQGRGRIA*GQKFKNSLNNIARPHLF KKRKKISLMRWLK
3205	11256	A	4152	477	684	LYLCSALKKNQ*EPGMVTHAWNPNSTLG GKGRRTA*AQEFQTSLSNVGRACLYKIY IFKISQAWWHAFVI
3206	11257	A	4153	108	419	SHTLGGQHGRIMRSGVRDQPGQHGETPS LLKIQKKKKLPGRAGRHL*SQLLRRLRL ENRLNLGGGGGSETEIEPLPPQPG*TQ*R LPSQKQKNLETVSKKKS
3207	11258	A	4154	175	190	DKVRVSQVRLTSRHLITLR*IRKGRGKK RGCRERNREN RGK*KYV
3208	11259	A	4156	20	430	RPQTYTMVHLTPEEKCAVTALWGKANV DEVGGEALGRLLVVYPWTHRVFETFGD VSTPDVAVMGIPNGNADGMNVLWASIDG LAHLDNLRGTATLTHEHD*D*LHVDPEIL MLLGNVLICVLAHHCVGFEPSWQAA
3209	11260	A	4157	31	492	QRILQSRPFEGRVKQGVTWLLQLVGLVS ESHIGPELHLPCEEECHLLVSFGVNSPE DSSPLLTEWLWTSHPFLHCLFGASGR GLQTVPPFVSTALQNVCFPQKGKAPFL LSCATGGCSAGLRVYKLRSAPSCD*AGR TRGSSGESAPML
3210	11261	A	4158	165	433	GSGQADHPCVGWRQNSVNPRQVFLQAT G*LISASSGSINTNMAQGTAVVCFGPVYP PKAKGRARSQVTPCLTLPSKGRCLKILC YLFKL
3211	11262	A	4159	132	257	
3212	11263	A	416	1	154	PQRRVARRKRAVLPSTKA*PENTPSTFTS ASMEWASRSVHLGHSKRFGNLP

3213	11264	A	4160	2	111	QLLKDSARSTLVLYPCWARVSQKSGCCP LKVLSQRPGKGLGLWVEAWECPGAVA RCLCHPGPLCPASGTFTVPGTEPHS*LLL RNELPSPLF*LLGQSEPEKWMLPPQGAIS ETR
3214	11265	A	4161	3	116	GWRAPTSQPGGPAQVPCSSF*KILPGQH WSSTPAGPE
3215	11266	A	4162	273	793	DSLLLIQVDTMPFTLHLRSRLPSAIRSLIL QKKPDIRNTFSMAGGAPTSQPGGPAQVP CSSF*KILPGQHWSSSTPAGPE*ARKVDAA PSRCYL RDQPKGPFKVPGT EPHS*LLLRN ELPSPLF*LLGQSEPEKWMLPPQGAIS E SLRDL SKCLAQNLTHDCCSGTSCPPHCS DSFPYHLAPVLAEIFEIMEKVQWRNPT GSAICPLHRPSQKPACTGLRRK
3216	11267	A	4164	212	494	FSEAQFLANVAIKAILSEEISEGKGDRRM LADHTLILTERGSEGPCC*PQEV RPTVLS EWGCKCAQANCECSP*PWPHKSRAGHF PPLSLGKLL
3217	11268	A	4165	281	587	EIFFNPKREYLSLHWMDEHQCFNFIHHV GQGGGLGTIWQDVLQEYNQKNFLYNISLK DKFLGWMW*LTPVIPALWEAEVGGSL E PRSSKTS LGN MARSHPYKK
3218	11269	A	4166	113	564	IDRLDSAKIFGHL SIFDRCEKRRPDLVSG TGTCSGSFRRTVFPAPVGRDTSPIPRTH GPNFVP*TLVEKKPPAAW*TPACDLTSK PSIGPTILVPTPKVEPGSLPTA*DPLEPIQ SPEKK*SIVPQTGSFQTASQLTEAVPELV LVAH
3219	11270	A	4167	1173	1432	PIPVDLNTLMFCHYFIYVYHPCLEMFST CGLLSL*AQRPSDGYFFEAFIYILFCTMF FLNVQILYSSEKNTVFVDNHSYYTVLR
3220	11271	A	4168	75	270	QYISVVDTYLLMPRLATAILWITN*VFE KRV AHFGYHWSLMVRDRRISGVDRYYV SKGLENID
3221	11272	A	4169	271	825	SPPACLVDGQQALPSGGGLYPNSLRQGS VGQAGRGCLSWFCMVHFANPEDQFLGF QASGFLHVLKPPQGAATPSGSSQGGPA MFSGLPSEPPTPPATPQNPI LHSSTKLLCE AAAPTRGKPC TPSSIFQPWHR TDGKGRA GFSASGTRGRPHLTPSPVHQTG*EASQK GPALMPPGFOPPKGK
3222	11273	A	417	1	893	PTRPCKMAGEKVEKPD TKEKKPEAKKV DAGGKVKKGNL KAKPKKGKPHCSR N PVLLRGIGRYSRSAMY SRKAMYKIRKYS AAKSKVEKKKKEKVLATVTKPVGGDN GGTRVVKL RKM P RYYPTEDVPRKLLSH GKKVFSQHVRKL RASIY/TPGTIL ILTGR HRGKR VVFLKQLASGLLVTGPLVLNR VPLRRTHQKFV IATFTKIDISNVKIPKHL TDAYFKKKL RKP RHQEGEIFDTEKEY EITEQRKIDQKAVDSQILPKI AIPQLQGY LRSVFALTNGIYPHKL VF
3223	11274	A	4170	1	211	THPPPAEAPGAEGPQ*G*AKHPSAP*APL L/PRRRARASSRPVTSVTPSSGGSFRPGTP AQGVITAVTVSA
3224	11275	A	4171	1	424	NSRVDDFVRPGSSAAGRQMRGGGQQV PNPRPGFRGQQP*RNHGPVPASP WALAG DAGGMLWNMMRSWPVSGRPTLNPFNK QSGPRQHEQGPGEVDPVTPEEALPELPP GEPEFRCPERVMDLGLSEDHFSRPVGLFP GL
3225	11276	A	4172	1091	1421	RGIITEINKHPDHIHSPTHTCRHTFTNMH AHTHTPTYMH THTGMFW*K*N*GSLNS RSGFK
3226	11277	A	4173	1407	1607	LSDLNGNFH SKVMTRVNIKNYLKNM RPGAVAHACNCSTLGGQGGQTA*AQEL ETSLGNVVRLCLY

3227	11278	A	4174	1	294	FSRPDHLNGHIKQVHTSERPHKQVWV GSSSGLPPLPLEPLPSDLPSWDFAPALWR/ CVPFGS*HRLFPFSKKIIPSP*KPGPSTLQQ HSDLDPAFISG
3228	11279	A	4175	560	824	FWKVGCLPWELAHPAYLLPFPLGITSP*A LGFPRGTGGPWPTPFPPPLPRVSRPSQRRLG TIPT*SQPHACPLPLPHSGSRSCFHWLV K
3229	11280	A	4176	3	325	FFHVSRLNFYFFRYIKHCYFISLJILVSGS RVNLLLLGLIVYCFLVVFMNF*TWISHF LSFFFFCRDGVSHCVAQAALFTPGLKC WDSRREPPRAEMFLFLT
3230	11281	A	4177	292	543	SPGTYAPKRIGKGAGNWKPGVPFRSSM WKETQPLSSRVSKVKSLSVSPSPPIPVVP LLPALPK*GHSPLVSPPLHRSSQGESP
3231	11282	A	4178	3	367	IQMDCVLLFPAQAQISAPPLIMKTPTIS WGLEHICPSYPWNHSPSLYHRYAMGFG MFFQSGPCSSWAWKLSRTLPSLVVALSS AWPLTRG*RLDLGPPAPSSYVGFSSQASP SPSPAAQC
3232	11283	A	4179	67	283	MCAYIKIDKGNRMCTNMIYLVEGIGVT FSLTLMYKYTKLIHMLSYVKRLTLISCAF YVNLWINLYYAMFI*MCAYIKIDKGNRM YCTNMIYLVEGIGVTFSLTLMYKYTKLII MLSYVKRLTLISCAFVNLWINLYYAMF IK
3233	11284	A	418	934	1272	WCILGLCTSLMSRTALFPSRHTFFA/RSH SAASKL/EKKKKEKVLATVTKPVGGDKN GGTRVVKLRKMPRYPTEDVPRKLLSH GKKPFSQHVRLRPSITPGATILILTGRH RG
3234	11285	A	4180	268	467	GNRRALLRLPALGPPRSSP/DGFTPGTTA RPSILKRCMPMTPLPPDPSAAAAPGTSELW TSPDSSSSSR
3235	11286	A	4181	880	1200	GNPTWLFPSYQGNSGPAEQS*GFTPGT TARPSILKRSPMTPLPPDPSAAAAPGTSEL WTSPD*QQQQQDGKEAPQSGRHDSSSA LRPAAPEALPVSRRPPPPPLAA
3236	11287	A	4182	343	720	SCLLTVISFHQIKKIYVHTQLTKAGQKE FICRLSLALTNLPPAAPPLAMAPCVSPAS RQDTVLGAGPQPPSGPAPTAPQQA*AR WQLGPPSPGPSILPPREGRPSAPSGAGWG GDLAGPSQVHF
3237	11288	A	4183	789	1015	MSLMVPLMPYGGP*YLPPSPPAYPIWEL PLPQRDSADVSRRLGGRGVAVERDSPTE KSNISKFLYQVACAVTHL
3238	11289	A	4184	319	471	IMWYIHIMEYI*PQKGRKILTHATI*MKL EDIMLSEISQSQKNKYCIISVI
3239	11290	A	4185	68	422	GSPSRCPAFLSSPVAARPLTHFTGAGL LRASGEPACLQTGSVSQ*PPRAPSSGLPL KHSPHQCSAQHSGKEGLGGGTNTTREN* PSPRPLCMGAQAGRMLLLPAVRNHVL ESGSV
3240	11291	A	4186	135	500	PPWVTPRWERGWGVIRDTGDRVRSQRQ QGLPPKLQSGWEVESWLGPRPRVFPQS VPGTPR/SPAAGGSQPRCPDARPAHKGPR APGARCGPPAPPGLPPAY*PGRPR/PRP ARR*TPLTAA

3241	11292	A	4187	365	1452	IGPEVPEGCHFRSGESRGDATLAYRVESE HHLGLEGCAGNATLVQGVGRKIPCLGLR GAILLPQIAVRLGSRIMARPAAPGLSQA RSLARRGCPAAGGSQPRCPDARPAHKGP RAPGARCGPPAPPPGLPPAY*PGRPRRG LHGGRHRSRRPPRRGPAAPGSPPAEVAG ASARGRAPGPPPCPRPPPIPAAPRVEAG PSARPSVPAPAPAPSRSPRLPQPPAAPWG GRASGPKDPGTAPPPPTRTQSARNPSRSP PPAPPSPASAGASADDPGTPWHRTGPPC QSQTRKHTGP*AARDQRQSRKDDSDPTG LCHCLRPAGPKCLKGLWFAFSVHPPWSS TPWLQSGRVNLPLAQDIFLL
3242	11293	A	4188	200	390	GPHAKSAFFPP*LSEQLGQG*QPGQTPVG RLALSVAFPPQGVGFPAKAGGTGEAFGG LACPLP
3243	11294	A	4189	805	1030	LVLCLPHSQLTKGTSHTCLTLQGPL*KL TRLALFRLGAVAHACNPSTLGGPRGPIT* CQEFKTRLANMVKPLLY
3244	11295	A	419	1	2607	MAFAWWPCLILALLSSLAASGFPRSPFR LLGVANGIEVYSTKINSKVTSRFAHNVV TMRAVNRADTAKEVSFDVELPKTAFITN FTLTIDGVTPGNVKEKEVAKKQYEKA VSQKGTAGLVKASGRKLEKFTVSVNVA AGSKVTFELTYEELLKRHKGYEMYLK VQPKQLVKHFEIEVDIFEPQGISMLDAEA SFITNDLLGSALTKSFGKKGHVSFKPSL DQQRSCPTCTDSSLNGDFTITYDVNRESP GNVQIVNGYFVHFFAPQGLPVVPKNVAF VIDISGSMAGRKLEQTKEALLRILEDMQE EDYLNFLFSGDVSTWKEHLVQATPENL QEARTFVKSMEDKGMTNINDGLLRGIS MLNKAREEHRIPERSTSIVIMLTGDANV GESRPEKIQENVRNAIGGKFPLYNLGFG NNLNYNFLENMALENHGFARRIYEDSD ADLQLQGFYEEVANPLLTVGEMEYPEN AILDLTQNTYQHFDYGSEIVVAGRLVDE DMNSFKADVKGHGATNDLTFTEEVDMK EMEKALQERDYIFGNYIERLWAYLTIEQ LLEKRKNAHGEEKENLTARALDSLKY HFVTPLTSMVVTKPEDNERALADKPG EASYQPPQNPYYYVDGDPHFIIQPEKDD ALCFNIDEAPGTVLRLIQDAVTGLTVNG QITGDKRGSPDSKTRKTYFGKLGIANAQ MDFQVEVTTEKITTCGTGRASTFSWLDT VTVTQDGLSMMINRKNMVVSFGDGVTF VVVLHQVWKKHPVHRDFLGFYVVDH RMSAQTHGLLGQFFQPFDFKVSDIRPGS DPTKPDATLVVKNHQLIVTRGSQKDYRK DASIGTKVVCWFVHNNGEGLIDGVHTD YIVPNLF
3245	11296	A	4190	90	417	LALEILSYFYLLYLPVWHFGFNSVVALSL KILNIIVYLFSSFKSLRNFSALVSIFVFCF SSFSACFSLNSKDF*NPDIEKKPHVKNS RIYKTQYSKDHQRENQFR
3246	11297	A	4191	2	672	GRVGFTPGSWEAFMVKNIVPKLGMCLG ELVINPHQQHMDAFYWVIDWEGMISVSS LVGLLEKHFFPKWLQVLCWSLNSPNYE EITKWYLGWKSMSDQVLAHPSVKDKL NEALDVMNRAVGSYVGAYMQPGAREV NIAYLTHTERRKDFQYDAMHERRAGPQI GLLRSLGKNLKICAKKEPLEIYLWANLK EYYLAKTGQGGPPFFLTRAPEGLITAWA LWG

3247	11298	A	4192	1642	2785	RMTSSCPMADRTCPLPFSHRLIWEVWMP FVRNIVTQWQPRNCDPMVDFLDSWVHII PVWILDNILDQLIFPKLQKEVENWNPLTD TVPIHSWIHPWLPLMQARLEPLYSPIRSK LSSALQKWHPSDSSAKLILQPWKDVFTP GSWEAFMVKNTVPKLGMC LGELVINPH QQHMDAFYWVIDWEGMISVSSLVGLLE KHFFPKWLQVLC SWLSNSPNYEEI/TPK WYLGWKSMSFSDQVLAHSIWSRDKFNE ALDIMNRAVSSTVGAYKQPGARENIAYL THTERRKDFQYEAMQERRRPENMAQRG IGVAASSVPMNFKD LIETKAEHNIVFM PVIGKRHEGKQLYTFGRIVYIDRGVVFV QGEKTWVPTSLQSLIDMAK
3248	11299	A	4193	264	638	PSRTRIKTKOMATSEILPSFVATMDASNF SFWQVLC SWLSNSPNYEEITKWYLGWK SMFSDQVLAHPSVKDKFNEALDIMNRA VSSNVGK*GFPFWMSWPQVSDFTHVND TESEFSGSCRQPKP
3249	11300	A	4194	2413	2707	EMHVY/WTERSGSRL*SEHFGPRPRWVDH */RQEFETQPGQYGDTPSLLHPLLSTCPS FLSLFSFLVTFFFSSFLSLFLIYLLSRHDF LACDCFLFLD
3250	11301	A	4195	835	1050	GSR*HNLQIIGRPRRADHLRSGV*DQPGQ HGETPVSTRNTRISQAWWWTPVIPATQE AEAGESLEPGRWRLW
3251	11302	A	4196	2	112	
3252	11303	A	4197	36	172	
3253	11304	C	4198	1	1482	MVTHACNPTTIGKLEPSYVIRKFLDAQRI HNLTAYLQTLHRQSLANADHTLLLLNC YTKLDSSKLEEFIKKKSESEVHFDVETA IKVLRQAGYYSHALYLAENHAHHEWYL KIQLEDIKNYQEALRYIGKLPEQAESNM KRYGKILMH HIPEQTTQLLKGCTDYRP SLEGRSDREAPGCRANSEEFIPFANNPRE LKAFLEHMSEVQPDSPQGIYDTLLELRL QNWAEKDPQVKEKLHAE AISLLKSGRF CDVFDKALVLCQM HDFQDGVLYLYEQG KLFQQIMHYHMQHEQYRQVISVCERHG EQDPSLWEQALS YFARKEEDCKEYVAA VLKHENKNLMPLLV VQTLAHNSTATL SVIRDYL VQKLQKQSQQAQDEL RVRY REETTRIRQEIQELKARVKAMPPPGKVPR KENLWLQCEWGSCSFVCSTMEKFFEHV TQHLQQHLHGSGEEEEEEEEEDDPLENSV NKDIRNKSAILPSRSNC*
3254	11305	A	4199	913	1299	ELGIVGKHAPTGGAGYHFLGMAAEVL SKFTAVLEGAGTAFPATQHHRVVLADCF VFTETDCVLPHADKTQDCRRNSVPGAT HSAPT DNRKWSGISGMTFRLWKS RMQG PRSAWLC*ACSPHCFSLVW
3255	11306	A	42	1	818	MAGAEGAAGRQSELEPVVSLVDVLEED EELENEACAVLGSDSEKCSYSQDKAK VNSGNKYNDNFFGLYCICKRPYPDPED VRELEVKPGVTKISTEDDGLVRNIDGIGD QEVIKPENGEHQDSTLKEDVPEQGKDDV REVKVEQNSEPCAGSSSEDLQTVFKNE SLNAESKSGCKLQELKAKQLIKKDTATY WPLNWRSKLCTCQDCMKMYGDLDVLF LTDEYDTVLAYENKGIAQATDRSDPL MDTLSSMNRVQQVELIC/GIQ*FED
3256	11307	A	420	1	1842	
3257	11308	A	4200	1	587	GAEETWEPTDGSASAAQDGVQWCDLGS LQPLPPGLKPSSHLNLPSSGTAG*RPCAL PGKVPRKENLWLQCEWGSCSFVCSTME KFFEHV TQHLQQHLHGSGEEEEEEEEEDD PLEEEFSCLWAGMWLLFSGQFCLTSSAM SYFHCYHTKLKQWGLQALQSQADLGPC INDISPACTSSISLITSCVWGTTCGLD

						IPGISRAGTSSLISLTTSCVWGTTEILR
3258	11309	A	4201	262	409	RSGGRNISSRKSITAHRSISAPGSISAQSSI PALKSILAHGSIPSQG*DTPLGWDAPMG* DALEGWDAPLG*DASRG*DTPMGRDAL SG*YVPSPTPSSWANALPCHFLPQMFPLT NVMFTNPISAE LNCGRGAGWQEWMC PG LLQAPVPNHIHSCSPTASRGLRGQLSSQL PETAKAAW
3259	11310	A	4202	729	922	WFETIEATQLYFNELPDTFHCVLCFLLCH FYINVKAFCSCCCCCSCC*NTCSLIFRPTV YYALML
3260	11311	B	4203	306	392	LTSGTYPKSGKAVEEAQPNSPPAEDVRD R*
3261	11312	A	4204	965	1298	GNLVTAFLVLCIPDESLYRSICFLLHHQ KLHISVPQSPRWGWTSLGLAGTPRCSP PTPPRLLLPQSPRPGATGKIPRPDRTP VRPLGHKEPRGT*GKSWPAVAQPPG
3262	11313	A	4205	1	324	
3263	11314	A	4206	310	513	
3264	11315	A	4207	65	191	QEISIMVGFKATDVPTATVKFLGAGTA ACIADLITFPLDTAKVRLQVRG*SLGVLM VSTLFPQRHRPLKGQCLEHRDDWRWE GQHAYPCSYVLALQIQGESQGPVRATA SAQYRGVMGTILTMVRTEGPRSLYNGL VAGLQRQMSFASVRIGLYDSVKQFYTK GSEREYGARV*AGNQHHGWVQGHRC PYCHCEVSWGWHSLHRRSHHLSGYS
3265	11316	A	4208	12	237	NFKYILFKILHLGEKIYNVYTFCNNLFH CTTYILYNSTINQPKKITS*HLNKNLPCK KHSMGHYKVVFKEFFK
3266	11317	A	4209	361	444	QRLKNNCVITCS*QRPRVFSSSPQGLAA CHYRGLRSSPQSRGRCLSHFSCQGVHPR SCQRGSAWSPRTTGQRGPTVGTGRTRK RLNTAYLLGAASADILRPSTSR
3267	11318	A	421	3	377	
3268	11319	A	4210	89	198	APP*THKWKIPHTSCDRSLSTCWHTTV DSTSLREK
3269	11320	A	4211	119	698	PTLMLHYIPWGRGRLGGWGQCGQSHSA RCAGTGTCLPMGTLMMHMEASRQVWG GCILPLFPYFLPPQLPS*LGPSNIWVAKD GWLRLDLDPP*YEWTLGVNWPSPGILAY WTVSAPSLGFSGPITDAALPCYNLGGSS PHPRRGSRFQKTGLSLTEGNLPFPPIPT PYLPHFLHIRVWPANVEQMCRCK
3270	11321	A	4212	728	916	FFFPI*SV*KVSAQG*SLWPGVAAHIYHF SILGGQGGRIT*GQEFKTS LGNIVRPHLY KSGG
3271	11322	A	4216	162	528	LLPYGLDRGPYGGVWCGLPYP/SGTVST GPPQRTASPLPKQSS/GQPPEFAACTGT DAI*DARDAGDAGEGGSS/GAEPASSPAG AAGGGCGLAARSQVPSEIRSGWLKGS QLASSGALVICP
3272	11323	A	4217	160	835	GGCGRRTVLVKDYQFFAEGRLIQFRWE NAAARFSALAPDMQRQNFPPPTPPYGP GGGGWGTGSNFRGTPGGGGPRTALPSR RVRGVTRRRRTGPRS*ARNGSKSLSAK RRQLSRGARFGSPSPGGYPGSYSRSPAGS QQQFGLLPRAAADPPRVLQGHHLHD QGVLEKKECLMSWKINFKAFCCLKIPW GWPRTQGICSGYKPNNTAILKHSQAKKE DTFC

3273	11324	A	4219	198	392	
3274	11325	A	422	1	621	MTKRCLDHRGEWLPAGAGGGHTEGTRC LHHAPVTWVGIEVDIFEPQGISMLDAEAS FITNDLLGSALTCSFSGKKPVWLRGRHT PKGNDLSEVLAGLSPCPIPLAGLTVNGQI TGDKRGSPDSKTRKTYFGKLGIANAQM DFQVEVTTEKITLGTGRASTFSWLDTVT VTQDG*APLQGLQGGLOQEGDHSQPQP NPGALSEPELV
3275	11326	A	4220	318	718	YHHLQGRDIPGNLRVEGSVPHPAVRPRF SASCSQPPFPPLSPHLRARARPRWERQK FTPSLDGSFWGETPAGGCGSHHPWQGP RALFRRRSQ*PRR*AHMEGRVGRRSPLL HPPWEKTPS*LSGLTDRKQA
3276	11327	A	4221	1	563	ETFSHFERYLQFKAEPPLTSRGFVEKS TALHRISAEHPESMMSEVHERALQQHPQ AQGGLEETREKMHADNNFTKTQDRLHA SSDAFSGLRFGSGTSRGYQRMVPREEI KSTSAKSSVVSADTAPNFSRLSNVTV MEGSPVTLEVEVTGFPEPTLTWWVAYN DKP*METNSITEKNHSVSTN
3277	11328	A	4222	366	622	LSTMLHQHLLSVLLKLSQSLYVVYSFFLI QSTLQSGTRVTLKCRQLQAGAVAQACN ASTLEG*GGWIARAQEFETNLGNRARPC L
3278	11329	A	4223	43	245	
3279	11330	A	4224	634	1316	GSGPHSPGKWMVDDSDREHSRDVRSGR LTLMVTECLSLQEFNMDLWDFHKYMR SHKAESSELVRNSHHTCLYQGEGAHHIM RAIRQVRLRLTRLSPEIVELIEPLQVVRYG EGGHYHAHVDSGPVYP*TICSHTKL VAN ESVPFETSCRYMTVLFYLNNTVGGGETV FPVADNITYDEMQLQDDVDLRDTRRHC DKGNLRVKPQQGTSSLLVPTCLMGKV GWVT
3280	11331	A	4225	506	708	FLMRSEFL*KVFPHP*HS*GFPCVCSLMS CVG*LLGEGFSTFMTFIRFPWMCSPDDS GFEIFPLIS
3281	11332	A	4226	1	1662	MIISIDAEEKAFDEIQCFMLKTLNKLID GTYLKIIRAIYDKPTANIILNGQKLEAFPL KISTRQGCPLSPLLFNIVLEVLARAIQEK EIKCIQLGKEEVKLSLFADDMIVYPENPI VAAQNLKLISNFSKVSGYKINVQKSQAF LYNNRQTESQIMSELPFTIASKRTKYLGI QLTRDVKDLFKENYKPLLSEIKQDTNKW KNIPCSWVGRINIMKMAILPKGIASFTGY CIPKPEVILKLETGKEPWILEEKFERSQSHL EEPSEYNNNGNSFWLNEDLIWHQKIKN WEQPFEYNECGKAFPENSLFLVHKRAYT GQKTCKYTEHGKTCYMSFFITHQQTHPR ENHYECNECGESIFEESILFEHQNVYPFS QNLNPTLIQRTHSISNIEYNECGTFFS*D RVSLCLPG*STVARSQLSAASISQVKRSS H/CLCLLSTSDYRCMPCLANLCIFCRDN CAMLPLVSNS*AQNLKLISNFSKVSGY KINVQKSQAFLYNNRQTESQIMSELPFTI ASKRTKYLGIQLTRDVKDLFKENYKPLL SEIKQDTNKWKNIPCSWVGRINIMKMAI LPKGIASFTGYCIPKPEVILKLETGKEPW LEEKFERSQSHLEEPSEYNNNGNSFWLNE DLIWHQKIKNWEQPFEYNECGKAFPENS LFLVHKRAYTGQKTCKYTEHGKTCYMS FFITHQQTHPRENHYECNECGESIFEESIL FEHQNVYPFSQNLNPTLIQRTHSISNIEY NECGTFFSEKLALHLQQRTHPGEKPYEC HECGKTFTQNFTEHLRRHTGEKPGFCNE CGKTFHQKLALIVHQRTHIRQKPYGCNE CGKSFCVKSKLIAHRTYTGEKPYECNS GGVRPALWDERSCGYVSAGTKRAEGEV

						WKGQGEEMGSIVERLVTLK
3282	11333	C	4227	472	681	MNHKIYVYGHTQQFLYCSYVFKRYEFY SNPTLQGFLCSPHSYFYKYLLLTGRNLAI IILNIFAQWYQSL*
3283	11334	A	4228	2	277	RAEPTAGEVWDGAGPMGAELKPWARQ RKVEMDHVGPLLSPPPGRS*SPGPGRGR SRWTMLGPFSPRPQAAVRGPRPGVLGSP REALEPPGARHPRAVTAAPRELQGCGST VRAVAR
3284	11335	A	4229	1	240	ALLGWVFNLYKEITTTTPSFRRRSYILGF VKLYVSEHFHFFFVWLYYFL*MHCEKFY FRCNAGRRSQIMYIVFLKSLSS
3285	11336	A	423	3	2722	FSDGLCMVALSHLGSALQLGSLCFPRSPF RLLGKRSLEPGVANGIEVYSTKINSKVTS RFAHNVTMRAVNRADTAKEVSFDVEL PKTAFITNFTLTIDGVTYPGNVKEKEVAK KQYEKAVSQKTAGLVKASGRKLEKFT VSVNVAAGSKVTFELTYEELLKRHKGK YEMYLKVQPKQLVKHFEIEVDIFEPQGIS MLDAEASFITNDLLGSALTKSFGKKGH VSFKPSLDQQRSCPTCTDSSLNGDFTITY DVNRESPGNVQIVNGYFVHFFAPQGLPV VPKNVAFVIDISGSMAGRKLEQTKEALL RILEDMKEDYLNILFSGDVSTWKEHL VQATPENLQEARTFVKSMEDKGMTNIN DGLLRGISMLNKAREEHRIPERSTSIVIM LTDGDANVGESRPEKIQENVRNAIGGKF PLYNLGFGNNLNYNFLENMALENHGFA RRIYEDSDADLQLQGFYEEVANPLLTGV EMEYPENAILDLTQNTYQHFYDGSEIVV AGRLVDEDMNSFKADVKGHGATNDLTF TEEVDMKEMEALQERDYIFGNIERL WAYLTIEQLLEKRKNAHGEEKENLTAR ALDLSLKYHFVTPLTSMVVTKPEDNEDE RAIADKPGEDAEATPVSPAMSYLTSYQP PQNPYYYVDGDPH/FSIIQIPEKDDALCFN IDEAPGTVLRLIQDAVTGLTVNGQITGD KRGSPDSKTRKTYFGKTGASPMAMQMGF PGWEVTTEKITLLEQARCAFFSWLDTV TVTQDGHFLASSRRLSMMINRKNMVVS FGDGVTFVVVLHQ/VCWKKHPVPTVDF LGFYVVDSHRMSAQTHGLLGQFFQPFDF

						KVSDIRPGSDPTKPDATLVVKNHQLIVT RGSQKDYRKDASIGTKVVCWFVHNNGE GLIDGVHTDYIVPNLF
3286	11337	A	4230	1508	1686	IFFQPKECLYKNL*GLGAVAHACNPSTL GG*GGWIS*VQEFETSLGNMAKPRLYKK YKN
3287	11338	A	4231	596	729	YFPNKHGILCRVQWLSL*YQPPLWESEV GVLLELKSRTAWATW
3288	11339	A	4232	1212	1344	ATCLSLEKIQKLLIQNPGR*ASCDSSLL GCSPDLSSHFTVL
3289	11340	A	4233	2	114	
3290	11341	A	4234	1	326	
3291	11342	A	4235	37	199	
3292	11343	A	4236	3	263	
3293	11344	A	4237	164	298	
3294	11345	A	4238	60	152	
3295	11346	C	4239	512	805	MSSLPLMITDTQQA VSSGLWIGIPNYRVF TPTGTWVRXPHATESLHKFNLRNRTWEM GLQRRVXTXGTNVKALESAAQPWNQ AGRGDNFLLWRKGGD*
3296	11347	A	424	1168	1627	RAGRGGEHKLNSYGGRRARSQGHLLS SALSPFVSAASYQPPQNPYYYVDGDPHFI IQIPEKDDALCFNIDEAPGTGLRLIQDAV TGLTVNGQITGDKRGSPDSKTRKTYFG KLGIANAQMDFQVEVTTEKITCGTGRA STFSWLDTVTVT
3297	11348	A	4240	1	361	EPRMLYTRYVSDPEFVISRVDDFVVLQL FRMSSLPLMITDTQQA VSSGLWIGIQIS LTQPGSTIS*YCSFFKSVIICHLMIT*YTTS SFFRPGCLASQIPESYPAGTWVRAPHAM EKL
3298	11349	A	4241	545	865	PNNKHPYKSVTILSLCAVLFSLYIFNSGH FYFTSSIQFRHLNPKFNNLFYQTFVLR TK FL*H*QIKAEPLIVEHK*KIYKPPYLFNT QVLALKLKR*GFLYIIS
3299	11350	C	4242	47	319	MVFHKARTRMKERTDTAMQAESASETN KRAHPALPPVLPGXGRWARRGQEAPRP HLLSPQSGQGGQAPPWRERGVTRLKLG EGCRGLAP*

3300	11351	A	4243	211	472	STLGGSLCAQSGCSFEPLPLRGHPAMPV KCAQPLFSSPCPPCLPRAAREGEQGEHA CWFQMHFLLALPYLCVPSSWSWLYGTP CF
3301	11352	B	4244	1	1023	MCWAPSTRGGSPALHPLLLLPHPLPAR CTGFRAPAVPSSPAGIFGHIAVIGSPFPTA GGNTSDSFSNGCSQDVGSPRLCGCGLLG VGIWLSVSQGNFATFSPSPSLSAANLVI AIGTIVMTGTGLGCLGAIKENKCLLSFFI SPVAELILLILFFVYMDKVNENAKKDLK EGLLLYHTENNVGLKNAWNIIQAEMRC CGVTDYTDWLPSAGGEHGSRLPHGRT PRAAGATAPRLCGERAAMKRSWGMASF MTLFQHIHRTGGNHVHLGPKIFASFPGA TDISSGLGGDYIICDPKEKKYRKPKREPH LQ*
3302	11353	A	4245	630	841	DTGPCWRERGVTRLKLGEGRGR LAP* HLLPPPKSSSQPCAPLTPTAGWLPEEKAE VCSGCPPCSPSYKP
3303	11354	A	4246	29	360	HSLISQREKESERERARESERE**RASERE RERGRDKIPTRKGGEVQFLQTHFFFLIF LTAFFEQYFKERGSYYRYRGKAKKGG RGEEKNSRSRNPSSFTGRKKRV
3304	11355	A	4247	253	451	NWSAGAALLSAAHAHTPSPHQARPTPGS PPSAALWGSPSPSRSPHFSPITDL*MRPE RHPSSAPF
3305	11356	A	4248	355	500	ARCGGMHLYSQIFGRLRWEHCLR*KVLS QVWWHAPVFADIWEVEVGALLEARSRL L*CAMLLPVNSHGPTWAMQ
3306	11357	C	4249	175	387	
3307	11358	A	425	87	508	MGCFIREGGEENLIKKRFVSEAEADV RRKRRQEEWENVRKPEDPEECPEEVYDP RSLYERLQEQKDRKQQLRGTVSNCKN MVRGLDEDETNFLDEVSRQQELIEMHR IEEELIELNEYRIALWNVGISYENYEGRG
3308	11359	A	4250	342	608	AGSGTIGMLRPADERGGQSRCSRSAHPI SQAAPCPAFLNRPFTGPS/CGPSVTSRNT AGFCPE/GPGCPPSLAEASCPSPSCRAGS HWA
3309	11360	A	4251	56	277	TVSVQRHQAVQSPVVVFTEHIPQDAWCS PSCAPGN*PPLCPTNKPCALQQGMKPL ALKKSLGGTVCCGSKRD
3310	11361	A	4252	235	721	DLADCSLQLQSRSSWKKCSTMLQKVLV PPEAATSLSHPTPRPLPHPPALGSPLQPPS NTFGP*CCLSQDAPVFSPVKLHLVTVPA SSLANESRKGPSRPFVSRTPAPSSSSITSIS DSGIQNATVWSGVRLSVSASSFGLTSPF SASGVLSVSPLASTL
3311	11362	A	4253	1866	2283	IRILYRSPHLQLPCLTRFLVKKSYSVTGN WMVSLKD*SLRLDCWHGPLNLVKLDEV WQNLGTSTKSL*NNFKNILGKINTFKTL FGGGMKLIPCKVSFSIYLMVNLESHDST WHLQANQTPHFDVSPVLVLEFPFKF
3312	11363	A	4254	2	767	ELLFDKSTMRRPFGQKASSLPPIVGSRSKS KSGNDRHSKSTVGSSDNSSPQLKRKG KKEDVNSEKLTCLKQNVKLKNSQETIPN SDEGIFKAGAERSETRGAAEVQEDTDQ VEVPVDQRP AEIVDEEEDGEKANKDAEQ KEDFSGMNGDL*EEGGREATDAPEQVEE ILDHSEQQARPARVNGGTDEENGEELQQ VNNELQLVLDKERKSQAGSGQDEADV DPQRPPRPEVKITSPEENENNQNKDYA AVA

3313	11364	A	4255	79	928	TWQRCNLNPCLHIPVLCSLSSTMWDVLL PLDRGDLHLSCIDSSNWALFRCSKVVL YHCVEADSKGLRSVLDLTLNKTNLELK MESQTEKLNLYLRNNHEEAGTTQNEFKV SVCQYLSRYGGGGYHYKRQSFHKQSK ELMGRHRLLLTIANRHEIAELRWTLQTL ELELQAQWPLVRMLQQ*EP*ERLTC*R* RENQEPPVQVVEEQPRANTKETRKSSF SQPMSASTKEESQDGRRKGG*LGGRARE GKMLHQKSLGFKEYFEGRGAGPTPSGPT VTQLK
3314	11365	A	4256	235	674	SGKQNNPQATAKAEACTETRSQMGATE TSSTFDYLGATSLKSPPHRKVVFCTIET SLHSNSL*ILLPLHSISNIQKQTQTSNLNIN LQPATAGPPSQAPPTALSELPGGRSAPEP SHAAPFARVPPSSGSPRPNARWAARA A
3315	11366	A	4257	60	471	CLGSLQPPPTRVKQFSYLCLPISFFFLFF FGLFLRFSLCHRF*AV*L*CSLVLFSSCFL CLGFAMVFGSVGL*FSSSLECFQALFLQT FLLSFPLFFMNSN*PCIRLTEVVRILSDAL FIFKNSFSCCADAWADAW
3316	11367	A	4258	392	517	MTLKDVVAHACNPNTSGGRGGWIT*GQ FKISLANMAKPRLY
3317	11368	A	4259	446	767	IWYKSTHSSVIFKCEFFLQFLSLSALSPR HECSGAIMAHCSPLLGSSDLPASFLNFS WR*CLHYVAQPGLELLGLK*SIPPWASE SAGITGLSHHAWPKYELLF
3318	11369	A	426	90	549	QGASQTTTSETSCLGIAR*TFLGLAFVRIE RIDGNLKMHLIVEPYVTWGFNPKSVRE LILKRGQAKVKNKTIPLTDNTVIEHLGK FGFICLEDLIHEIAFPKGHFQEISWFLRPF HLSVAHHATKNRVGFLKEMGTPGYRGE RINQLIRQLN
3319	11370	A	4260	119	342	ISICIKININIYACYVYIILCIRIYLSKYILL ENCI*CTILFYVIFYVYIYLHIYILLRLCPF FIYSWSPV
3320	11371	A	4261	374	471	GKK*KCPHLSHLYINPGEKSYLFETSGL NF
3321	11372	A	4262	255	496	LYKFQTSVPLT*FIKALYITFYNSR*RG YYSKFKT*S*RPGMVAHACNPSTLGGRG GRIT*SQEFETSLANVAKPHVY
3322	11373	A	4263	231	417	CELPVTRHGAGCVCSSTVLP*PCFPSPV SQSPSVCLSPFSDPCEPPYPVLESPLDC SF
3323	11374	A	4264	1204	1398	ASFLAISMSVVRVGVPFYHLFFLRQSLIL SPRLVGVR*CDRG*LQPLPGYK*FSCLG LPSSWDF
3324	11375	A	4265	581	705	LLAECGAHACIPSTLGDQGRQIT*GQEFE TSLANVVKPLY
3325	11376	A	4266	3840	4074	AQEYRGQLRQYSETMSLQKKFKNRSAG CGATCL*SQLLRRLGWEDHLSPGGRGCS EP*SHHCSPA WVTEDLSPCHP
3326	11377	A	4267	173	421	
3327	11378	A	4268	423	595	SCLSINFHLGQAQWLMPVIPALWEAKVG RSP*VRMVISIS*FRDLPASASQAFNISH

3328	11379	B	4269	1	1224	MPTVGKAQARRRTRDTLLLDITQVLIDQ SPRKDTGLAQQTGVIVPSKGVKYWRAQ LKGDMDKYASPAFELFYFSVRAQSTDGIV TLLDPTTREDCDISSAPNPEVRTQRQAEV AGVGLLAVKVPRDEEGVLGGAPGPQKR SRVCGEPTLQRRSGPLPVARPGSRCPPPT SVSSPVPEDEYGRTVVMIRLDNPGISGRT IENNPELEKQLPGEPSSENSPYLGPPQVLF LLRDPREDVMLLLNQPTTAEKQAVLQ AAEIFRNEQQISYNTSKGKKGDRECEEIA ETPFQIGSEAVPLDNPWNSSSSAGEWK RRHFLICILEGLERTKAKFLNCSKLSMVD QKPDENPAAFMERLREALIEQTSLSPDVS EKQLILKDKFVTQSASNIRRLQKQAIGP ISTLKNLLK*
3329	11380	A	427	215	870	RAPPNGLTQQKKGKGLRFRLESFLHD SWRQKRDKVRLRRLEVKPHALELPDKH SLAFVVRIDERIDGVSLLVQRTIARLRKKI FSGVFVKVTPHNLKMLRIVEPYVTWGF NLKSVRELILKRGQAKVKNKTIPLTRH/S Q*WRSTWGKFGVICLEDLIEIAFPKHF QEISWFLCPFHRLSGPSCYQK*SGLPQGD GHTWAIGVNASNQLIRQLN
3330	11381	A	4270	1016	1393	IFQLGEYIFLFLFSVFEMESHVSQTAGVQ WCNLSLQPLPPRFK*FSCSLPSSWDYR QMPPCLANFCIFSRDGVSPCWPGWSQTP DLKRSAGLGLPKCWDYRRETTAPSMFL QNLLALVPMQQR
3331	11382	A	4271	825	1246	RAEGFCPNWCCQSNILIPCHDPGSRSAQS DWACHLGWQSGSGQNHGVPAGFDAL QLPGNTSRVGAPQGGSGRGRKDGPGNS H*AHGTGWRECYGDRSRKRNQFVHL APRSEIFLILACTLRNNGSASCPSCFDS SFLRVPRTGRFWGSTWGVTPGI
3332	11383	C	4272	442	522	MRCASPSTSKEFSCALLQCWLQDLG*
3333	11384	A	4273	322	1025	PLLCVLLAPPEGAVGDICKKEDAGNMPS TSEGSIIYLEMAHFLRNKLAGSSVRKPDS GFLWEGALRAWNMAAPSGGVNCEEFA EFQELLKVMRPIDDRIVHELNTTVPTPSF AGKIDASQTCKQLYESLMAAHASRDRV QKNCIAQTSAAVKNLREEREKNLDDLTL LKPT*EKSQRS*KWVQSELNVVEVVNDR SWKVFNERCPNSLQASKE*IKRDSFFFFF FLRTGSSHKS
3334	11385	A	4274	22	54	
3335	11386	A	4275	506	622	TRDSAHAYNPSTLGG*GGRIA*VQEFKT TRAHSYTLIPT
3336	11387	A	4276	296	495	KHVRPYITHSLGGKKDFLILEKIWLGIWA HACNPSTFRGQGGRTA*A*EFKTS LGNIV RPCLYLKT
3337	11388	A	4277	270	558	FWIFLRSFYVIRKHLIGHFHPWPRVLKC* KHGGWKVHGGPGQ*RQKGTGKEGRKG LRGRRELTEEGARPLFSSGPVESTQIVPLP QPPYVGAAAS
3338	11389	A	4278	51	113	
3339	11390	A	4279	179	387	ILVGFCCLFPPPSNK**THHTHTHTHPH THPVVTNRISLQGICRKQKQTSQGPFTA TSLSPLSDSAV
3340	11391	A	428	476	821	TFTWPLFVRIERIDGVSTWCREPLQDFA LRKIFSGVFCKGTPQDSKMLRIVEPYVT WGFPNLKSVRELILKRGQAKVKNKTIPL TDNTVIEEHLGECYSLGVSWGRKPGSLK L
3341	11392	A	4280	464	596	EFSPGMGAYTRSPSTLEHSGQIT*AQEL ETSLANRVRPCSYMW
3342	11393	A	4281	468	564	YAFYRTQVPGGIRLV*CRLRVLWSNLIK KQS
3343	11394	A	4282	780	837	

3344	11395	A	4283	993	1050	
3345	11396	A	4284	175	387	HFGEAEAGWITRSGDRDHPG*NDETPSL LKIQNISRRAWQAPVVSATPEAEAGEW HEPQEARACSEAEFEP
3346	11397	A	4285	161	409	PPGVIYYLFBVKVRLIWGNVMTV*VYMTL LSFPYPQICIYTIKYVYILPI*NIYTYTHIC IYIPLFLCLLILAIKEGAANV
3347	11398	A	4286	1910	2120	SVSGFWLEAMLPSLSEGOQPCRLQPFIGN KSLTGWVAHACNPSTLGG*GKWIT*AHE FQTSANMMKPCLY
3348	11399	A	4287	1156	1320	KNSS*FFYFLSYLKNKNRPGAVAHTFNP NTLGGGWIT*YQEFETSLANIGKPCLY
3349	11400	A	4288	1497	1767	PSASPPQVPIPALQWTGPGRQNPL*CLH IGLCSPQPSDGPWRKACSLFQVPSHQCG RIRKKINKVHICVFTASRVRWKPKPAAA NDQL
3350	11401	C	4289	1434	1655	MKKFSHILKKKFFCTLVPIIMLKLMLNKLK SQCKTEGKYCTLAENLFHHKIHCFPSS DHRSHFSLELAVVKKL*
3351	11402	A	429	33	370	ATRSRLGKHTRRSKSSAIQAVRIISQVLR CKQRCMHCPRTIPATLQEHKSVNNPSAQ QRTKTWSIHTPAPHPAPHPSTHQ/HPH PST/PAPHPSTHQHLHPHTSISSIRTRG
3352	11403	A	4290	275	485	TNWKLSLCEKLYSTHFCTDHKAVLFP*C LSCFVLLCVLFICVLFVGFRLSFCFVFTT SVISTSFFLAWS
3353	11404	A	4291	889	1199	KKCVVCVCVCVCVC*LLKLMLVGNFRA LWGSEWFLHHLSSTNRKMLSLQGHV
3354	11405	A	4292	502	768	SPCDQTPVEEGMLPKFRKSLQGFSLNFH DILILPSQK*FCIRGSKTMYIWPQTVSHTC NPSTLGGQGGWIT*DQEFETSLANKVKP RLY
3355	11406	A	4293	3	309	IFGRDGFHHVQAGLD*TPDLK*STHLG LPKCWDYRHEPPCLARRYFKNNKNDN LLSHHTHKTTVNILPIFSSCTDVLHNHD VECNVFSLDLVNIFQSC
3356	11407	A	4294	204	317	
3357	11408	A	4295	1905	2032	VKHLDTGQK*GCNAFNVGQSGPGPDAA PRWASRTPGGVNAGI
3358	11409	A	4296	2	225	KWQVTWLSFCSTFMSPSSWSSCS/PPCSA QPYAPVSCDGPFRFPEPLD*GRLKTY FPPPCVNWGCWGQCVISQ
3359	11410	A	4297	299	663	LAHITEIRNLILHSLNNPLWLEPTRIEKFS RGKVTSLHPRVKKMSPPSPKNSHPPEEV GSASSFLREPSPGGSQHSPYPAPSIDAM VPPYRVP*TPFGIKEDLTKPLFWGITLL PCV
3360	11411	A	4298	1	406	MDWEGSLPLVFNYCRDASLIHPRFKGV RPRRDACLGPSPLAASPAFLGKGQTTIDA ELRVTLTVEDSARLHPGEINSHVAHTKP VWWSLHTDARETHLQRTHFQSWLV/ CIRP/MNPAKSTVSSVRTQT*APLP
3361	11412	A	4299	236	768	VPCRESPRALALPRKEMMRA*NQNKTK HDSRHCRISPVGNMDIAENNYNSFKAE GPNSSASTPPYNLFASPPHTCSGLQFH STITDAELRVTLTVEGNRMSVVRSSFLGL NQLKLAKSMMAAYSIFEELASLYSNFH TK
3362	11413	A	43	46	511	QLRMAGAEGAAGRQSELEPVVSLVDVL EEDEELENEACAVLGGSESEKCSYSGS VKRQALYACSTCTPEGEEPAGICLACSY ECHGSHKLFELYTKRIFRCDCGNSKF*N FGMQLLP*QSK/DVNSGNKYNDNFFGLY CICKRPPDPPEDEIPDE
3363	11414	A	430	42	334	

3364	11415	A	4300	302	897	SVAKEGVEVEVSHTCGLKWGDIRGGCE GGFGLGEKAAMRCGCSPIVREADNLV KVSPPSVLIKKGTDL PSTVRVTRRSASV MVLTMPLAPATFLRGNCWAGGGGLVTE *NCKPDQV*GGEMIKGL*GGG/VRGCGRI ET*LGLARRSLGRRGEVRLVWRS GTLLP KYCAFTVFTTARPGDPLCLAQWVPCP WSLAHC
3365	11416	A	4301	111	275	SRNETESRTRCEEGR**KDYRVEEQRLR KNWDLARPGKEQLPAFQSGNLSRQLH
3366	11417	A	4302	3	220	SLQPLSREDLGRSQSESLGPEFQGLWEW LPGELNSPICSVPHRWDVA*EESWAAG SPWPGGQISGTCSKLL
3367	11418	A	4303	2	347	LTMPLAPATFLRGNCWAGGGGLVTE*N CKPDQV*GGEMIKGL*GGG/VRGCGRIET *LGLARRSLGRRGEVRLVWRS GTLLPKY CAFTVFTTARPGDPLCLAQWVPCPWS LAHC
3368	11419	A	4304	2	265	
3369	11420	A	4305	3	865	
3370	11421	A	4306	288	597	TDFSVRCKGCRTGPFLRLIFQDRIVGVEL IAV/C*RHGPRFSSCRLSCRRPDKTCRL MCHQRLSGFPQEQTQRDSRCIQLLFRQR FAAASCPHQVLLQTQYF
3371	11422	A	4307	3	188	KPRRSRSESLGPEFQGLWECLPGELNSPI SSGVPQRWDTA*EESWAAGIPWPGGQID FWHL
3372	11423	A	4308	498	803	HLGPEFQGLWEWLPGELNSPISSGVRHR WDVA*EESWAAGIPWPGGQISGTCSKLL EEEVLEEGLAAAVQAFGSSCVLEMWLG FVSQWRQGIATFFYYCTP
3373	11424	A	4309	3	338	KPRRSRSESLGPEFQGLWEWLPGELD SPISSGVPHRWDVA*EESWAAGIPWPGG QISGTCSKLLGEEVLEEHLAAAVQAFGSS CVLEMWLG FVSQWRQGTATFFYYCTP
3374	11425	A	431	55	1078	SERRRGPLCLPSDSVLDSCGPPMYCGIAE PSLRRWDPQRSPLASCRLLGCLAIRRH PNFPRPPIASSILQIKMATAAAAAAVMA PPGCPGSCPNFAVVCFLERYGPLDLPE LPFPELERVLAAPPDVGNGEVPKELVEL HLKLMRKIGKSVTADRWEKYLIKICQEF NSTWAWEMEKKGYLEMSVECKLALLK YLACEQFDDNLKFKNIINEEDADTMRLQ PIGRDKDGLMYWYQLDQDHNVRMYIEE QDDQDGSSWKIVRNRNELAETLALLK AQIDPVLLKNSSQDNSSRESPLEDEET KKEEETPKQEEQKESEKMKSEEQPMDLE NRS
3375	11426	C	4310	321	734	MIKHQGKAAPVRDRRQSFVSTDKTCLL CLSQKMGIEIKRRERLKS GKEKVWLRD RERLEKRTILRASVFKGEKPAAGERGKV WSCDSIHVLQEKGSRPQISVLCILNHRKY SPRFSVWSLKPPSMKLEVRKRCQR*
3376	11427	A	4311	867	1111	RHCRYGTR/ARCRSANAGAMILTMKQL AIVMRVYQHQRVRRSMRPNRGARSGMS AVGAYYSSCIRVMTALQSCTGDDEAVL L
3377	11428	A	4312	1	560	
3378	11429	A	4313	2	268	
3379	11430	A	4314	11	783	NLFLRPQKDQTYWHRIRLGQTKHLLKEL KVYTYLLYATISF*DV*RHC/RSAILAEAK ETKETHFIRGPKTLAPVTDWEGSLPLVFN QCRDASLIHPRFKGFRPRRDACLGPSPL AASPAFLGKGQRLKTDARLPWKPPDH HRRRASGNSHSGRVQPPSRLPSWAHVEC LRLFQEHGASCQWIYRSGIWRVTVVFC VRVKRPPNRLCVSNMAVYFTWVQVHYP LYENNKTLRALRMHVESLACGVRESS

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3380	11431	A	4315	177	434	LCLWLQPPF*E*IAGQVGEG*SRNETVSR TQCEEGR**KDYRVEEQRLRKNWDLAR PGEEQLVPSSEKRDPLRVKDQGRCPV V
3381	11432	A	4316	1332	1602	
3382	11433	A	4317	797	954	
3383	11434	A	4318	1	817	
3384	11435	A	4319	3	93	LSPS*AIISVPCTYTPRWPEATEDPQKK
3385	11436	A	432	1	568	
3386	11437	A	4320	874	1114	ESLGAQAEDYCRSGALTESLY*SSSKRK CGVGVPKQSLLYSTV*WSCGRGSLSRP QNDRASSFQPYEKSTEAKLPKGL
3387	11438	A	4321	264	1259	GDRWEGKKEDLGRVALGTETRKGLMC KRMPGH/AGTSDHLSILGQELFRSCRME KLK/RAI/CPAIWNYCRVCIGVKRHCRRK *DA*ILQDLNNSCPKIDKWSEVPDVQAFF YTSVPS
3388	11439	A	4322	607	769	SQVLRPTQPKEHLANFKSEDRSVRPLSPS *AIKSPVTCTCTSR*PEATEDPQKK
3389	11440	A	4323	495	658	GLTGTTWAHAFTHWLVVLSHSTELSGC ERLCGPAELGTFTLWLF*RKPFADHWP
3390	11441	C	4324	218	352	
3391	11442	A	4325	444	994	PMTHPFFFFPAEVHEPNQRQAFLVPVSQ ARWTASSLFSSWVSASTSPQLEELQGST QTWHFSATCSQQPSRCVETVDPSSLTQ QGLAFSAPTGRQAQRCSARMAWNP GDP LPPPSVHPCTPHCP*GPPQPPSASTPWG SCCSRWGHQAILGCRDRERCRGTCSSRP WLPLCLLPRFPDKWS
3392	11443	C	4326	296	625	MVSEGHTSPLAKSSASELHRTSWSTDNG MDFWRECQFRAKEIQGENEALNKSSKR AQLVSDLNMERQVRRKYIVNAGSLLH FILSLLSSIHLKTAFCVLLQGNLYTL*
3393	11444	A	4327	221	344	KVLSSDFCSVPFCVCVCVCVCVCVCV LTLL*NSSIYYGH
3394	11445	A	4328	441	656	AHNYIYFQRYIHQTYTDTGRGMRIGMR DQKKRPGTVAHTCNPSTMGG*CRKTSQ GQEFKTRLSNTVRPNL
3395	11446	A	4329	409	749	RRGRERKRHTHIHTHTHTANLFVSVFLY FLSFLHLCALCLS*WM*RCSANPILPTGP YASQTFMILPSCTTVISLPCHWLLFPQYS QTLYSLFTELNGQITVTSKITYTSKI
3396	11447	A	433	1	572	ANNSPALTGNSQPQHAAAAAAQQQQQ CGGGGATKPAVSGKQGNVLPWGNEKT MNLNPMILTNILSSPYFKVQLYELKTYHE VVDEIYFKVTHVEPWEEKSRKTAGQTG MCGGVRGVGTGGIVSTAFCLLYKLFTLK LTRKQVMGLITHIDSPYRALGFMYIRYT QPPKDLWDWFESFLDDEEVCCQG
3397	11448	A	4330	1682	2410	LNKGGQTDIASSQTCLVGHVESDGLHT TMIGNPNEAFLSPENNCPIWQRRWTHI QKKKMNGMHTHRRNEAETIAGILTVQE LFPRNTSLTVIDVHSHSVLFCTTIQVLISQ VNHLYLPLPAFAKFPVIFIIITSTGLLFTYV RVVMYNFVISYNGKKNQNI*KVICTELY FSSFLKMICMVRKRRGQPGEGRASREL TFYTFVLCTALLILHPIMILLEPICKLLR

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3398	11449	A	4331	2	57	
3399	11450	A	4332	19	192	
3400	11451	C	4333	218	364	MTRVSSCFSDLATDRSFTHKGNNIVSSNS KIISLTWMGFEILKTQHKI*
3401	11452	A	4334	172	304	PSPVFLAPGGVRAGNSLYPRGPGFH*PRF GPFPPRGTGREPPF
3402	11453	A	4335	258	509	RGHSKQQRDIPRVLDHLMNFSFKIVTVC RSLYSFI*KQAQVKLFLHLHPSSSHTHTH THTHTKPTLLLTGPSDDSWVFRWC
3403	11454	A	4336	1	2411	MSFLGILCKCPLQNESQEESYNAYPLPA VKVSMDWLRLRPRVFQEAUVDERQYTW PWLISLLNSFHPHEEDLSSISATPLPEEFE LQGFLALRPSFRNLDFSQGHQGITGDKE GQQRRIQQRLISIGKWIADNQPRLIQCE NEVGKLLFITEIPELILEDPEAKENLILQE TSVIESLAADGSPGLKSVLSTSRNLSNNC DTGEKPVVTFKENIKTREVNRDQGRSFP PKEVRRDYSKGITVTKNDBGKDNKRK TETKKCTLEKLQETGKQNVAVQVKSQT ELRKTVPSEARKTPVTQTPTQASNSQFIPI HHPGAFPLPSRPGFPPPTYPVPPVAFSM GSGYTTPAGVSVPGTFLQPTAHSPAGNQ VQAGKQSHIPYSQQRPSGPGPMNQGPQQ SQPPSQPLTSLPAQPTAQSTSQLQVQAL TQQQSQPTKAVPALGKSPPHSGFQQYQ QADASKQLWNPPQVQGPLGKIMPVKQP YYLQTQDPIKLFEPQLPPVMQQQPLEK KMKPFPMEPYNHNPSEVKVPEFYWDSS YSMADNRSVMAQQANIDRRGKRSPGIF RPEQDPVPRMPFEKSLLEKPSSELMSSHSS FLSLTGFSLNQERYPNNSMFNEVYGKNL TSSSKAELSPSMAPQETSLYSLFEGTPWS PSLPASSDHSTPASQSPHSSNPSSLPSSPPT HNHNSVPFSNFGPIGTPHNDRDRRTADR WKVTDKPAMGGFGIDYLSATSFSESSWH QASTPSGTWTGHGPSMEDSSAVLMESL KSIWSSMMHPGPSALEQLLMQKQKQKQ QRGQGTMNPPH
3404	11455	A	4337	17	300	TFKFYRNLNFIILKKSYPMYATFFIYLYI YASFLVLTEIFYFIISKELLPVFIYQVYF PCFFLG*FIYLSSKNPPYNLFILLPFYNFF NN
3405	11456	A	4338	257	476	KAQMSLLDTLTHPVWLLCLKLCGAV*V KL*EYF*SIENICTAICVCGVCLCIYVTMC VCVRAIERKLKECLS
3406	11457	A	4339	283	494	GQRCEPPLPPSFG*DSG*EPPFPAFQKA GGPASPSPPGPH*DPTGPASEWKMAT MGNRPPEMVSA
3407	11458	A	434	6	223	TVTNFGEISGTIAIEMDEGTYIHALDNGL FTLGAPHK/ERIALKSGYGKYLGINDEL VGHSDAIGPREQWEH
3408	11459	A	4340	766	1083	FKHFGPFHKHMLMVLFKIQNVLFKDGNT FEVRRGGSRLSSQHFRPRRADCLMSSV V*SQPGQCGETLSLKKNTKISQA*WHVP VVQATWEAELGGSLEPRRLRLQ
3409	11460	A	4341	2	163	FVFFVETGFHYVGQTGLELLTS*SARLGL PKCWDYRHEPPRPAYVEFYFYSALL
3410	11461	A	4342	192	440	ATVWEEPPCSPPPIPRARFWGPRPECSS RGQKPKPPAYMSPPDAWRPAWLPSSTPT

						YD*T
3411	11462	A	4343	1875	2210	PLSQVITGKHQKRKRHLEEGKERPEKEQ SKHKRKKSYEDTDLDKDKSIRQKREED RVKVSSGKLKHKKKKSP*VYPPRKKN VSTGKRKRNLKKGQKRKCFGMSLFLG F
3412	11463	C	4344	217	396	MSEETAKEVMRAYLQQLRQETGLRLCE KVFDPPQNDKPSKWWTCFVKRQFMNKS SXPGQ*
3413	11464	A	4345	1	546	
3414	11465	A	4346	216	324	VFFFSL*NEADRTLIIYITLYISECLKKLQK VIKLG
3415	11466	A	4347	71	650	NPGAAMPAYHSLSLMDPDTKLIGNMAL LPIRSQFKGPAPRETKDIDIVDEAIYYFK ANVVFQNYEIKNEADRTLIIYITLYISEC LKETA KSGNSKKPKVEERKCFGLGIH*FF PFPGEPPGFPL*QFFAKPIANKQEDEV M RAYLQQLRQETGLRLCEKVFDPPQNDKPS KWWTCFVKRQFMNKSLSGPGQ
3416	11467	A	4348	552	872	SGPNCCEEADAQLAEESGNASHTSFTV* VRPRRACHACNPSTLGG*GGRIA*SQEFE TNLGNTVRPCRNSGEVLNRKTVSIRRAL RVFSPHHTARLHPAAAAARA
3417	11468	A	4349	199	375	FSLGGIPPFHRRGNWVSREWPGTVAHTF NPSTLEGRGRWIT*GQEFETSLTNMVK CLY
3418	11469	A	435	3	685	RTQSGNVYFASTSVPPRPGAAPGHILVLS RLQPLRAEVSRSRLRVEYSYVKTTLV FKGTAKSKKKKSKDKK*QREDEETQL DIVGIWWTVTNFGEISGTIAIEMDKGT YI HALDNGLFTLGAPHKEVDEGPSPEQFT AVKLSDSRIALKSGYGKYLGINSDGLV V GRSDAIGPREQWEPVFKWGMKALSTSN SCFIRINHEAEDIEAKSKTAGEEEMIKIRS
3419	11470	A	4350	368	546	
3420	11471	A	4351	2	211	YVYIYKGIESRVSRAICTPSMAALVDR WKKPKCPLMYEWINKM*YTHIMEYYTE *KRKYCSTLSHATI
3421	11472	A	4352	1	676	PK*WGFLPLIYKKGKDGGGTGWGDVLP SPSLGQGGGKKGWPKREGGRDLGAERK AGKCREKWKQSKMKGRSRKTGGERVK KPEKHQDTGLFPFQIGGGGLRLSRVCVP QPQVGRGSVSLAQFLSCTSSD
3422	11473	A	4353	1029	1252	CKFVYSSLLFIYSSFFICLFIPLFAPVLIYP LAH*LCKPCSSYMSWVNIQYSIYFRHKC FRNIVQKILYSIKM
3423	11474	A	4354	299	561	FPSWQRDAQASLTSPAPLIYPKATPFRKR PFRRQLWNKGLIQSKLTQRLTYVAHTCN PSTLGG*GRQMTWGQKFKTSLANMVKP RLY
3424	11475	A	4355	17	195	FMDAQVTFKLYIYIYTYVCTYMYITY V*MCEYLFYIYARIYMYI*MHYYTYISL TP
3425	11476	A	4356	3	565	
3426	11477	A	4357	1	597	
3427	11478	A	4358	1	567	
3428	11479	A	4359	1596	12368	
3429	11480	A	436	115	662	AGFSLSAQKSPGAMA*YSYVKS KLVLK GTASKKKKSKEKKRKREDEETQFD/TVGI W*TVTNFDEISGTIAIEMDEGTIHALDN GLFTLGAPHK/ERIALKSGYGKYLGINSD ELVV/GRSDAIGPREQWEPVQNGACAA VFTVIGSEKQSECSLLRESRAKYHGCTH GOISSSLKQHPRWY

3430	11481	A	4360	48	436	RTGSSSGLSISATCLISQRRYSEDCWNVY SLVRSG*ERGS*LLSTYYVLGSLPDVFTY INSFQKTYLK*MGPGMVVHAWNPNSTLG G*GRRTA*GRELETSLNIVRPCLNNNNN NNNSNNEVNGIRKEG
3431	11482	A	4361	2	2551	
3432	11483	A	4362	322	1288	RKNWGLRKIPWSSLKQEQNLPEFSGSKK AFFGSTWRKKDGEPEFQGSGLCPLLKAR PLLSQLPLLRAISTRKPGQTWKNKEHHL SDREFVFKEPQQVVRRAPEPRVIDREGV YEISLPTGVS RVCLYPGFVDVKEADWIL EQLCQDVPWKQRTGIREDITYHQPRLT WYGELPYTYSRITMEPNPHWHPVLGTL* NRIENTGHTFNSLLCNLYRNEKDSVDW HSDDEPSLGRCPHIASLSFGATRIFEMRK KPPPEENGDYTYVERVKIPLDHGTLIME GATQADWQHRSQAQNTTLREPRVNLTF RTVYPDPRGAPW
3433	11484	A	4363	249	906	RIHFPRVSGPSQSNPKFAVASRGGFSLSL SAQPDPLPPPLGEALALSLHPVPRSTET VAGDSSELQLGLRSPQQPLAGLAFLARL FLLFPPP*RCKSKPN*NDRRRSSVDSQIHL VGRESAHLPLAGLRVCVSLPLLARCFQGV LQGVPLWIPSPGGS/AGVSGRRREERH MGVVVMRVRVEARVSS*ESKI/SRALR*S THLGLPKCWDYRREPPCPAH
3434	11485	A	4364	843	1186	QHSTKNSGGWAQTPYGSSQISVCVYIHT YIHIIFFFFL VETESHVQTAGVQWHN LSSL*PPPPGFKRFFCFSLPSSWDYRRTPP HPANFCIFSRDGVSPYWPGWSRTPDLR
3435	11486	A	4365	127	601	NLILNVTWPTQLAKQERLHLRLKTSVV WVVRKEKPTRFRLGAVSHCPQLLILQL VLSPTSKTLP*EPPDSESP*PKRK GKPSW GRTGAPNLHSPPLSPEGPPWAWNPLKL PPPQHSSGAVPSSACSPWAGSVPAAPPSV CYLIYWNLSQALHR
3436	11487	A	4366	30	436	RRRCGGCFPALPGSPHKPHEQLPPLCPRV PVA*PSSSAEHPDPRAGKGGGRGL*AGS SPGAVPHPPSIPGRKNRMGSLEG/RGAP APRRGGSGAGAAE/ASLTWPGSTGPAPG SHGCSAGVGPSRWAWSLPQRCGR
3437	11488	A	4367	497	924	KRGSRGWFFSTFHHLWGRLQAHLGPT PALQPCDPGAGARTARPGQTASAAPAPL PPRRGAGAPPLRDLARVPAPPCCAQRAP PSSSQPGRNQ**AASGPWRPPRQAEKEA SAGKRDRPVGARKTAAERDRRGQASG GQTR
3438	11489	C	4368	226	405	MCEKQPQNTTSFQGSYPKYTRGSLPELR QLLKVELFKGNWEHLQPRSMMLVRSG LSQE*
3439	11490	A	4369	3	275	TSMYVGPVAKDLLHPSAEEENRKHTMK RLAQSPNSYFMEAKSP*CYKITTAFTHA QTVGWVWGCSTVLCQPTGGEARLTERC AFTRNQR
3440	11491	A	437	1	380	GPPASVRTDSGHPRRAEGAVSTRTQAD PLAPCGPPRAGGQAYARLLLLQCLLA AARPSSAIDGSAPDSPFTSPPLREEIMSNN FSLESHNISLTHESSMPVENNITLERPSNV NLTCQFTTSGD
3441	11492	A	4370	266	455	AQWHTSIVLAAWEAAAAGLLEPRS*SRL KCTMIIPINSHCTPAWQHMRPCLLKKNF SNSFISK
3442	11493	C	4371	409	507	MNTRFLTCVPGWVKNDNYSIVCIDFLV VIAI*
3443	11494	A	4372	870	1027	HLCMCVRVCVCACMCTLLHLFSNGFII* CFCTST*AIHVMG*VAIKMYINDP

3444	11495	A	4373	1	690	FHHLEDSIIIFDAFLTLRKKRKKKKHNG NMPFSLFHMVNPMKISTSLFF*HKYMI VPISPQSHQYSSNGLSVLFLPVYRHSLEFF MILSTLSFRCLANILSHSLFILLGLLINRSL SM*SVLLIY*Y*SYILLQYLLTVLEFFSFHI *VFSLLRILFFFKIFTFSIWMPLSQSYLLR HSVFTDVPYLISYILICVDLFLNTLFCSIG LFILGLTQHCLNSSSFHIIVI*QSISSHLVQ* DCLCLHLCIFCALSCATKTKNKDVEIFIG LTM
3445	11496	A	4374	393	491	GLYLHRPIPHDKLLVQLSCPFR*THRG TES
3446	11497	A	4375	435	524	
3447	11498	A	4376	293	1228	NADNSLENFCRKSASCDLEQRRFIRFIKL RRGSFSERKQQHVSVRKYSFIONWVLEK DNKALNTRVIYNRFLFMMYKIKQNTDD GDCRLCSYHVLDHRHCKGSTCIDPFFL MTNYWCNYHAHFIDEHTEAQRARNGK QGDECEVGGIESRRRSGNSGARYVHDSS PPTSGIHSNARPSVRLFLATLSKIAFLTV SLLYEMTVHIYGEPLPRRQRTQLEGVG TLNGSVASVDPVFRNQQLHLATGSLMA SSSFCSVLREIIGQSLIMKTL*ITHHTH THSHHTHTERERERERETEREERVKF
3448	11499	A	4377	953	1317	VLTLGVSPLYVSKGFWFLLFS*TMFSH SPTWAILESWSSLARFSGMSGEPQMTPIG LQYLA*G*RPRNPTLVTFTEIS*VYFFILP LMSQ*MCLMHLFPLPQTFCQILQLYFFM AHIST
3449	11500	A	4378	9	359	PRKAELRIFEKVSVDAMAEDMEKLRPR LKKVHIRELVLAISIMPKTHKPMPLTRVT WREMLRPRDLK*EVEGGCRRCSSPR/V DPPGARREFRGGVRVRGRG/SAPPGGPG LSAML
3450	11501	A	4379	223	458	CLRRINPCSPRCRRPAWRRRRPGPRTRR RTDS*IRPKSGAASHPPGGAEGIPRGCS TRSRTRRRPEAPASRPCCLRI
3451	11502	A	438	3	217	RVMSHRKVASAPRRGSLGFLPRKRSSRH RGKVNSLPKEDLVHPLHLTCYLEDSPAF ADIVRNVYKTGGSAMN
3452	11503	A	4380	887	1172	FFPESELAQPEKRF*VPGKGRGLSPRLL PPRCRRPAWRRRRPGPRTRRRRTDS*IRPK SGAASHPPGGAEGIPRGCGQTRSRTRRR PEAPASRPC
3453	11504	C	4381	22	255	MPSSSAQLLLPHEVSPVLSCQLCFLKTR VCSYLWATVILGLDYCNLSLIPCLVSYFLL SLSLPCISVVFTQILLHY*
3454	11505	A	4382	23	361	LTTLVFAAGTPGKKRRGGNQWR*SPHYSC SGGTGGRPRPAFSLPGAPGQSGQISQSD WRRGPCS*SSGWCNSC/HPGWPGLVRRG MTS*WSYS*ATGP/GPGYKAIPGAS*RST SL
3455	11506	A	4383	2	310	PLLPAHPPWVSLPVT*PRCGSPQRTSSW NRHSHRPA*SLPCLGFAAGTPGKKRRGGN QWR*SPHYSCSGGTGGRPAFSLPGAP GQSGQISQSDWRRGPCS
3456	11507	A	4384	1021	1565	PHLSPAGTPLLPAHPPWVSLPVT*PRCG SPQRTSSWNRHSHRPA*SLPCLGFAAGTPG KKRRGGNQWR*SPHYSCSGGTGGRPAF AFSLPGAPGQSGQISVPPCRVPPLLQSR AGPSPSSFSKWELCYSHHILPLLIAHCQ ESLNTQQRLEASLSSNASEPTTAKCPH GTAACLLGD
3457	11508	C	4385	361	612	
3458	11509	A	4386	448	683	VNMERKKDLTESSLPAVPTKVPGMRMK LS*TLKTSLATRCQTLRLCSPTNQRLS QQEGVGVEKGELRIYLAMWIK

3459	11510	A	4387	1977	2160	VNMERKKDLTESSLPVPTKVPGMRMK LS*TLKTSLATRCQTL SRLCSPPTNQRLS QQEGV
3460	11511	A	4388	145	370	GRVLLVLFCEFFETESRSVA*AGVQWRHR GSLQP*ASVSYELEAAVGYGGTTALQPG RQSRALYLKTKTKNFLNLS
3461	11512	A	4389	248	452	GWVFTMLARMVLQ*NHLNPGGGGCSEL RSHHCTPAWATE*DSVSKKKEKEKKMR NETKTKWTCSPFIT
3462	11513	A	439	24	452	APSPDAMG/HSLWGKVNVEDAGGETLG RLLVVYPWTQRFDFSFGNLSSASAIMGN PKVKAHGKKVLTSLGDAIKHLDDLKGT AQLSELHCDKLHVDPENFKLLGNVLVT LAIHFGKEFTPEVQASWQKMTGVASA LSSRYH
3463	11514	A	4390	141	354	ARWADWLPLGIANCPRAHAYLETWEL EAHWKRTIVNFCVCVCLCM*VCLVALR LFCSSGMHHSFNRLQ
3464	11515	A	4391	354	592	IRCTQAFALTSVVS GPGTVAHASNPSTLG G*GGQIT*PREFKTSLGKMAKPCLYKNL GRHGDLCQARLLQLAEVEGFT
3465	11516	A	4392	63	353	ATEPVWPPCLWPQPLCAKDCRGVARP* CVRPPKASLVLPSSAGNASSIFMDYKCL SPCPFKQLSSPPQSTEPSPACELGLINVN LSSRPSLPSR
3466	11517	A	4393	357	559	LILETGSVCVFQAGVK*LCTSVIIAHYSL DLLGSSNPPTS DSRVPGCGDVHLYSQVD AAANLVVVA
3467	11518	A	4394	1048	1599	CRSKWGLASILWLKSFLLGHHLGDDGFK A*FKFHSKFTVLASSKCLLVGF*SHNYG *VRIHLFIY*IFIHF*KDFKSMFPRVLSSW PQAILPPWPPKVLGLQVLANCIPMFHF NWLKSSKWLRI
3468	11519	A	4395	24	452	APSPDAMG/HSLWGKVNVEDAGGETLG RLLVVYPWTQRFDFSFGNLSSASAIMGN PKVKAHGKKVLTSLGDAIKHLDDLKGT AQLSELHCDKLHVDPENFKLLGNVLVT LAIHFGKEFTPEVQASWQKMTGVASA LSSRYH
3469	11520	A	4396	38	553	APSPDAMGHFTEEDKATITSLWGKVN VEDAGGETLGRLLVVYPWTQRFDFSFGNL SSASAIMGNPKVKAHGKKVLTILGEMP* KHLADDLKGVTFQA*SELALVDKLAHVG S*RTFKLPGEMLLVTRFWQSHFRQKNFT PEGARLSWAERWVTWSWPVALVLRPL LKLNCP
3470	11521	A	4397	74	432	TTGTLES LCSNACFGALLPHPPAPGE*R PWS*HFTRYLGPLNRCAWEGGRG*TGPG LPSLGKALVEGIPSESPGPTVSHPCSPRP DPDQSAASLHQVPPPTVHCSHLTLP MPGWPGQ
3471	11522	A	4398	1	176	
3472	11523	A	4399	1	188	
3473	11524	A	44	275	403	FSHFWPPEFLRD*MWLGV/VAHACNPST LGGRGRWIT*GQES
3474	11525	A	440	37	527	APSPDAMGHFTEEDKATITSLWGKVN VEDAGGETLGRLLVVYPWTQRFDFSFGNL SSASAIMGNPKVKAHGKKVLTSLGDAIK HLG*SQGAPFAQA*SELHC DKPAMWDP ENFKAPGEMLLVTRFGQSHFRQKNFTPE GCKASWAERWVTGVASALVPSRYH
3475	11526	A	4400	1	118	
3476	11527	A	4401	1	227	
3477	11528	A	4402	1	157	
3478	11529	A	4403	1	133	
3479	11530	A	4404	1	169	

3480	11531	A	4405	1	143	
3481	11532	A	4406	1	89	
3482	11533	A	4407	1	166	
3483	11534	A	4408	1	190	
3484	11535	C	4409	21	218	
3485	11536	A	441	68	398	GPASNRLGFVVLETRMVSAVSDPPTS TTGSTMCECISIHVGQAGVQMGNACWE LYCLEHDIQPSGTMPSHKALWSSDNSFN TFFRETQPGRHVPGLSVDLEPAVIAQ
3486	11537	A	4410	1	206	
3487	11538	A	4411	2	185	
3488	11539	C	4412	247	393	
3489	11540	A	4413	1229	1784	RCRREMGSLSHSHVMVDSGFLWPCWRG PGSRTSNTVENRNPPPPRHPLGQLFILFQ SLSLHLSLS/CLSLSTSFFQSLFLNLSVSLC QSLPSPSL/CFSIPLSNHTHTHTHTHTHT HTHTHTHTESGRC*SVLFFPPCPYLHYR *G*GVGSAALSLTPHYEMTVFKGNLLY LPAVSIVSRVNL
3490	11541	A	4414	76	297	EIRTLRSRSSQSLWRRDVRWISGSLCKGH ASDHQLCQH*CTHTHTHTRHTHTHTHT HTHTHTHTHTHTHTPKMA
3491	11542	A	4415	48	327	EELEALRR\QRLAELQAKHGDPGDA\AQ QEAKHREAEMRNSILAQVLDQSARARIV SEQGLIEILKKVSQQTEKTTTVKFNRKRV MDSDEDDDY
3492	11543	A	4416	786	905	VSEQGLIEILKK*CQLTEKTSTVKFNRRK VMDSDEDDDY
3493	11544	C	4417	58	237	MAAEELEALRRPEAGRAAGPNTGDPGD AAPTGSQSTGQAEMRNSILAQVSGSSPA PGPG*
3494	11545	A	4418	115	432	LSK*CNKYTIHTHTHTHTHTHTLLNQPL K
3495	11546	A	4419	10	398	ENTVFIGLLKQQTRNIIPLKIFCLRLKIPP LTMPSPPPSPFRKSPDLVPAHTPKEGRLW PWPGPPGGPSKAAHARRPLSTCQD*PPQ REILPGPQPTSPTHCRMSREGRSGGTGAR ACQLPLLRPLAS
3496	11547	A	442	3	398	
3497	11548	A	4420	551	792	INFFFF*IIDRFSLCHPGWTAVAQSRLTAT LLPSRFKRFLCLSLPSSWEYRPLPPYPAN FCSKLLICLSTFYKDCGNSA
3498	11549	A	4421	56	193	
3499	11550	A	4422	1	3552	
3500	11551	A	4423	373	593	KKSLESINSRLQLVMKSGKYVLGYKQTL KMIRQKGAKLVILANNWPALR*SKRLNV LRLPRIHRERIYRSVNL
3501	11552	A	4424	118	206	VGGRPRSLRQGRWVARKEDKSRWESI NSRLAQLVMKSGKYCPWGTSETLKMIR QKGAKLVILANNCPALRKSEIEYYAMLE KITGVHHYSGNNIELGTAICGKYRVCT LVAIDSGGL*PFI*KACPEQTW*KEDEKS RWESINS
3502	11553	A	4425	1134	1287	HGQINQMEVNLPMDRKV*THHTHTHT HTHTHTHSSTSCPYTLKRNVKS
3503	11554	A	4426	102	443	SPIIPLPITTINILVYVLLAFLCIYHT*YLY IIFFFTNIVSYTYCFITCVFHLIYVNIIVY SLKNFTDITCSLWKIRSYRAKRYNCS KSHLPEINAFTLWQVSFQTL
3504	11555	A	4427	263	615	LNVSEGINVVKLCHELQHGPLNSSPFLIL LSHSEKINRASIMLKRYKLNNYILSAF NPPPGKIHHTHTHTHTHTHTHTESQKVK ST*EIT*IFPQQYTNLQREEHCYFLSHSE
3505	11556	A	4428	839	963	CVNGLVLGQAQLLRPVIPAL*EAEAGRL LEPRSSRSAWANM

3506	11557	A	4429	526	710	MGVWLNILTPTFGDQSAKGLTLQFKPAR HEFSQSGRTSFPIMPSPRLPDVA*ENPNG SLDP
3507	11558	A	443	1	255	
3508	11559	A	4430	2	539	
3509	11560	A	4431	920	1110	TAVVFLNKLQLHF*KFLSEAFDNEYGIA YNSLSSEILERLQKIDAPPSASVEWCRKC FGAPLI
3510	11561	A	4432	38	571	GSHRRCSFITNYVHLYIFTLYIYIYIYIY IYIYTQMHSPPAHSVT*LYGNLSATLE RPVTPAVVAVGFRVRSEKQLIVYEGARP RG
3511	11562	A	4433	145	675	NVAVASLSGAHTWKKQSQCFCVSAGLE TSMEAAIGDLSVFPGLTQLEGIQGLVEP VQA*ASSWSSR*AAHSQGPQHPSYHRSH LPKPTQRNPERSQMEAPSPKPLDQPVPE KRHRGASAMRRRKPISEGLAEMHLVLA VREIELTNCPHPEPNLATGKMTWLRSSS GFCESNRVT
3512	11563	A	4434	328	333	AFEFKRIDILTFKSSFAGSL*E*LHTHTHT HTHTHTNTCFLTMKELSNHPGNK
3513	11564	A	4435	1461	1710	SGVLGRAALLKPPSRARSSGSSLSILR LSSPGLSSPLCPTSQDRGIPQTFHLN VALT*AAHEMDWREPCVKTRTGS
3514	11565	A	4439	3	451	
3515	11566	A	444	2	732	YLVSCFRDMAFNFGAPSGTSGTAAATA APGVGFGGFTTSTTAGSAFSAPSAPTNG TTGLFGGTQNKGFSGTGTGTTGTSTG LGTGLGTGLGFGGNTQQQQQTAVGYS CMPSNKDEDGLVVLVFNKKETEIRSQQQ QLVESLHKVLGGNQTLTVNVEGKTLPA DDQTEVVIYVVERSPPNGTSRRVPATTL AHFEQANIKTQLQQLGVTLMTRELSP AQIKQLQNPPAGMFLESQSS
3516	11567	A	4440	26	529	NSTDSETHPWLLSPADK/TNVKAWGV KVGAGAGEYGAEALERMFLSFPTTK/ITY FPHFDLSHGFAQVKGHGKKAVALDALT KAVAHVDDMPKRRCP*SDLHAHKLAR VGPSTFKLLSHLPCLGEPWAAHLPRPS FNPWRLQRLPWGQSFLGFLKHRCLNLP NTR
3517	11568	A	4441	294	600	ISCFLCSETLSNFALFLKESNGPVKVWGS IK/AMTENLHGFBVHEFGDNTAGRVLCF FLECIWEL*FII*LFLLLINRACISAGPHFN PLSRKHGGPKDEER
3518	11569	A	4442	517	758	
3519	11570	A	4443	80	725	SPAASGGFPLQSLEPRTLGRGLSDFGDRS PVCVLKGRPKCRGIINFQKRESNGP VKVWGS/IKGLT*KALHGFHVHVEFGD NTARLYQVQGPFPNPLSQKTTVGPK/DE ESHCDLGQCDCLTKNGVADVSNEDFV NLTLQGD/HCINGRTLVPWKKPDDLGP KVGNEESSKTGNAGKSVWPCGVIGIA RINIPLGCSLRPPKLCVSC
3520	11571	A	4444	415	635	
3521	11572	A	4445	2	478	MAGKQAVSASGKWLGMIRKWWYNAAE FNKLGLMRDDTIYEDDVKEAIRRLPEN LYNDRMFRIKRALDLNLKHQILPKEQWT KYE/EGLCSSSALCFLLR*KDQPIECPSR SQEELL*SKLSPL*TAFET*AKENFYLEPY LKEVIRERKEREWEWAKK
3522	11573	A	4446	323	400	
3523	11574	A	4447	2	396	RPPTTTKFAAARQMAGKQAV*STQAKG LNG/IFKKWYNYNAARIQNKGLMRDDT IYEDDVKRSP*EDFPENLYNDRMFRH* EGHWTLNLKHQILPKEQWTNFEENFY LEPYLKE/VLFRERKEREWEWAKK

3524	11575	A	4448	3	314	
3525	11576	A	4449	5	340	GSGETSAKAFRSIWGPLPPVHRHGSPPSSV QR/DGPGLGTGEPRVYIRNKVANTGVPG APGPSIGGVTA PATDYCHRIAPILARRR RRRRRRRRRRRRRRGGGGGVAGGGGGG G
3526	11577	A	445	2	681	AREGSALRVAGVTYLVSCFRDMAFNFG APSGTCGTAAATAAPA/GNTFLLFGGGF GGFGTTSTTAGSAFSAFPTNTGTTGLFG GTQNKGFSGFGTGFSTTTGTSTGLTGLG TGLGFGGFNTQQQQQQTTLGGFLSQPT QAPTQSNQLINTASALSAPTLLGDERDAI LAKWNQLQAFWGTGKGYFNNNIPPVEF TQENPFCRFKAVGYSCMPSPNKDEDGLV VLVFK
3527	11578	A	4450	1	117	
3528	11579	A	4451	1	1973	DGGARARGRAAARRRRRRRRRRRRRRRR RRRRRRRRRRRRRRRRRLGLERPQTSRGR APGASRAEEKMEELVVEVRGSNGAFYK AFVKDVHEDSITVAFENNWPDRQIPFH DVRFPFPPVGYNKDINESDEVEVYSRANE KEPCCWWLAKVRMIKGEFYVIEYAACD ATYNEIVTIERLSVNPKNPATKDTFHKI KLDVPEDLRQMCAKEAAHKDFKKAVG AFSVTYDPENYQLVILSINEVTSKRAHM LIDMHFRSLR TKLSLIMRNEEASKQLESS RQLASRFHEQFIVREDLMGLAIGHTGANI QQARKVPGVTAIDLDEDTCTFHIYGEDQ DAVKKARSFLEFAEDVIQVPRNLVVIGK NGKLIQEIVDKSGVVRVRIEAENEKNVP QEEEIMPPNSLSPNSNSRVGPNAPPEKKHL DIKENSTHFSQPNSTKVQGRGMVPFVFG TKDSIANATVLLDYHLNLYLKEVDQLRLE RLQIDEQLRQIGASSRPPPNRTDKEKSYV TDDGQGMGRGSRPYRNRGHGRRGPGYT SGTNSEASNASETESDHRDELSDWSLAP TEERESFLRRGDGRRRGGGGKGQGGGR GRGGGFKGNDDHSRTDNRPRNPREAKG RTTDGSLQNTSSEGSRLRTGKDRNQKKE KPDSVDGQQPLVNGVP
3529	11580	A	4452	1	2115	
3530	11581	A	4453	2	424	
3531	11582	A	4454	1	456	RPRRPQREPTMVLSPADKTNVKA AWGK VGAHAGEYGAEALERCFLSHQDLLS HFDLSHGSSQVKGHGKKVADALTNAV HVDDMPNALSALSDLHAHKL RVDPVNF KLLSHCLLVTLAAHLPAEFTPAVHAFLD KFLASVSTVLTSKYR
3532	11583	A	4455	25	640	EFHRLRENPPWCLSPA DKTKAQRPPRLK LGAHAAGEYGGEPLERMFLSFPTTKDLLP ALRP*ATVSAQG*RAHGKVAADALTN AVAVHVDMPQTALSAPERTCNGAQAF GWDPVQLSSS*SHLPCLGEPWAAHLPRP SSTPGGCKASLGTFPGLFVEAPLLEPSK LPLKLGSLRVGHCFAPLGLPSPSPSCT RTPVVFE
3533	11584	A	4456	906	1046	PDHNNWSQ*TTTGAQRQT*KRTVKEV*S AHNEAMCFGT CASDCLYR
3534	11585	A	4457	1	383	MVLMPVVS AIPAEAEAKSSLIENDVCLSA KENHKS KRAITRTAERFPTE/SPHD/YPRK TARTGLRHAQQASL/PNWSTPLAARIAP VPPAANPQGVLLKSAGPHLLLARTTTC NR*VPIASPQTTHRME
3535	11586	A	4458	1	1509	
3536	11587	A	4459	579	919	PGSM/IPLSVSHSTGDDGRSLPKRRSTAPS MTSVYCFNCERCLVSCSLLLLSSLGPPCL AVLLAPFFAPFF*VFLLCVVVAGLPALLL LLVSSLLFLVLLSFCAASACFGFLSV

3537	11588	A	446	1	459	HRRPLYPAGIARMTRGDRTRTGCTRPKG SRTGGAVGAAMQEIGSVDHKFDLEIAV EQQLGAQPLPFPMD/KTPDSQAPISTVW GLLLPSLGLRSSLPRIFGPLRLFESGA CEFFLKAACGKGGMCPFRHISGEKTVVC KHCLRGLCMN
3538	11589	A	4460	1477	1691	YCNVSFGANLERA*TSFSALFIDLQPPGY RTTTSKHKVSSSLIKGHVLLDHSFHDNT QLWISTNAFRGN
3539	11590	A	4461	1076	1354	QKCAVNLHSLPITKLCRLFASCRAAR CCSHLTSQPVTA*LAGKVNPLPLGNLWE CDTKAGSQAMRTHLSITWRAVMQLPVI NTTYQRGKR
3540	11591	A	4462	880	1242	
3541	11592	A	4463	832	1386	
3542	11593	A	4464	46	492	HPVTLGDNTYRTHIKQLIKGEVFLHFTP DAVDVFRIT/MTLPL*RLQLSSQRADDQ RTLRCSSVRGRDAVHAAVWQFVCIRLD VTEAVIFQFPFQLSDSETVSQRCVDVGT FCRQYTFIFRRIFYFAQMSNTLRLFDDYA EEIHDRQ
3543	11594	A	4465	7259	7441	IASPGWS*RQECSSRSCAQCCQSTTTCR HAKQRSLALAHKPLAKLAGNGITPRLRQ ICR
3544	11595	A	4466	538	1056	
3545	11596	A	4467	1	1134	
3546	11597	A	4468	745	1263	
3547	11598	A	4469	3506	3826	EVWRPARRSRDVSCSRSHAYYVPGTA DWLWPS*RPSTTGVC*PVTWRWLEGQ WTPHLGRVLQEDSDSPTFPSALGIQETRP EPLKSPREVPTSGRTGVFHYVA
3548	11599	A	447	1	811	DGTMEDSEAVQMATALIEQRLAQEEN EKLRGDARQKLPMDLLVEDEKHHGAQ SAALQKVKGQERVRKTSLLRREIDVG GIONLIELRKKRKQKKRDALAASHEPPP EPEEITGPVDEETFLKAAVEGKMKVIEKF LADGGSADTCDQFRRTALHRASLEGHM EILEKLLDNGATVDFQDRLDCTAMHWA CRGGHLEVVKLLQSHGADTNVRDKLLS TPLHGAVRTGQVEIGEHLFLSLGLENNAR NREGDTALHDAGRNVNRYPIQ
3549	11600	A	4470	1	751	
3550	11601	A	4471	482	1200	VFSGPFGVGFFPFGSLCPCELSATVLEV APPLPGNRMSSRITMLSESCQRMVIVG YGRCFADRQNL MVCLRSMPNVFTGSCA RMRCCLSENLPVPPSKRAHTGRVAVKE SNQRWCSDGFECFCDNGERLVRTFALD CCDREALHWAVTTGGFNSETVQDVMLG AVERRFGNDLPSSPVEWREGVFNIDE EFGNESAQTGMLHHQLDPSVEGELHQN TGSTACCRADSTHISHWRFM
3551	11602	A	4472	1271	1681	TVITTGIGRPFSMESVFALNALQNSMMF TPC*PRAGPTGGLGCTSFSDPEILDGWPP QSSQLMIRMCFSVYTMLESCQGMVIVG YGRCFADRQNL MVCLRSMPNVFTGSCA RMRCCLSENLLYRHRNGHIQAEWP
3552	11603	A	4473	739	1257	
3553	11604	A	4474	1	2661	
3554	11605	A	4475	1	2370	
3555	11606	A	4476	421	972	
3556	11607	A	4477	766	1073	HRQLVIVFQQPLVSGFHEAELSLDDAKW VLHPGPDAGFHVFDVDGRFVLA*CCFK VLTLPGRSAISQSTAPRPAPRAVAPLGS HRLRQIAPLHAADYPAD

3557	11608	A	4478	1662	2045	PTALAAFSRRIVRITFLPVGDGFHQSGS LRLS/NPDALQIQPACRIFSSALITSVFACS VHEGE*LPVDPGHIRALLHR*R*KAESAC AVPCI*AWTDREYGCHNRRKSGVILRRT DDWMDGRRSRHT
3558	11609	A	4479	1	1803	
3559	11610	A	448	100	1532	EARRNWGAMGKARRSPPGHHRHCEGCF NRHCHIPVEPNTSCLVISCHLLCGATFHM CKEAHQLLCPLEQVPCLNSEYGCPLSM YRHKLAKHLQACPASVVCCSMEWNRW PNVDSETTLHENIMKETPSEECCLDTALAL QDQKVLFRSLKMVELFPETREATEEEPT MNGETSVEEMGGAVGGVDIGLVPHGLS ATNGEMAELSQEEREVLAKTKEGMDLV KFGQWENIFSKEHAASALTNSSASCESK NKNDSEKEQISSGHNMVEGEGAPKKKEP QENQKQDVRTAMETTGLAPWQDGV ERLKTAVDAKDYNMYLVHNGRMLIHF GOMPACTPKERDFVYGKLEAQEVKT YTFKVPVSYCGKRARLGDAMLSCKPSE HKAVDTSDLGITVEDLPKSDIKTTLQCA LERELKGHVISESRSIDGLFMDFATQTYN FEPEQISSGTELADLTAATPGGLHVELHS ECVTKRHN
3560	11611	A	4484	875	1075	
3561	11612	A	4485	2097	2179	
3562	11613	A	4486	4274	5255	HTLFGDKLCTVATLRETYGEMADCCAK QEPERNECFLOHKDDNPPLRVRPEVD VMCTAFHDNGETFLKK*VIRCL*FKIKK HGVTP*ANTL*KLP*QKYFQH*DLEVLL* *FFKEVVFDTTKFYTAKNMIKDILKFIE GYNLSQKFIDKFFNVFRYVYVYVVIID FVLVSNILPKFNHLCTHTHTHTLTLFST YLKNDRDKTIMCKLSLIG*LAESLEFGGS GENVDYNYFCNTVCYRK/ADCFSLKFR YLYEIAARRHPYFYAPELLFAKRYKAAF TECCQAADKAACLLPKVLCTRIEKKSL SNLILSILWLDLGLSV
3563	11614	C	4487	102	230	MFLSCRSVXXXXXXXXXXXXXXXXXSPFL LSPLLFLFHTYMRA*
3564	11615	A	4488	2	567	
3565	11616	A	4489	125	522	
3566	11617	A	449	124	602	WATTPFQPKSNSKMAELFMECEEELEP WQKKVKEVEDDDDEPIFVGEISSKPAI SNILNRVNPSSYSRGLKNGALSRGITAAF KPTSQHYTNPTSNPVPASPIKFHPESRSS DSSVIVQPFSPVSVSKTIRPAQGSIGCCL SISTVPSYNSGLS
3567	11618	A	4490	195	473	
3568	11619	A	4491	1	966	
3569	11620	A	4492	1	960	
3570	11621	A	4493	1743	1935	

3571	11622	A	4494	1	1540	NSGGSGGGTSGSGSSSGQGKMGQSQSG GHGPGGGKKDDKDDKKKKYEPVPTRVG KKKKKTKGPDAASKLPLVTPHTQCRK LLKLERIKDYLLMEEEFIRNQEOMKPLEE KQEEERSKVDDLRTGTPMSVGTLEEIIDD NHAIVSTSVGSEHYVSILSFVDKDLLEPG CSVLLNHKVHAVIGVLMDDTDPLVTVM KVEKAPQETYADIGGLDNQIQEIKESVEL PLTHPEYYEEMGIKPPKGVILLVPPGATG KTFLPKAVANQTSATFLRVVSGELIQKY LGDGPKT/LSRELFRVSEELAPSLRFIDRI LPPLGHKRYD\SNS\GVRRELQRTMLELE LLNPVGMGFDS*GRL*KLSWATNR\ETL\ DPALIRPRPAFDSKIE\FPLH\DEKTKKRIF QIHSTRMTLADDVPLDDLIHGLKIDLS\ GA*HSRAICTEAGL\MGL*GERRMKVTN EDFKKSKENVLYKKQEGTPEGVVSLMN HGLSSGKWLGDPSIPERDEVGGSCPEESL FPLIFY
3572	11623	A	4495	125	320	
3573	11624	A	4496	1376	1509	
3574	11625	A	4497	2120	2313	
3575	11626	A	4498	2	266	
3576	11627	A	4499	918	1475	
3577	11628	A	45	2	343	NLCQVFIPFLFHSLLYVFKTLKGLFQASF LGHLLPLSGTPGRPGGGGAGGSGRGD PPAAGASRTIPWPLLLQQLSSSSSHFKA/P SKLSSHG*PRALGPPGPYHRPPSPGTT
3578	11629	A	450	1	368	ICRFNPYVFLAAKADQLQVRTTQLT/CKS CWLYHCINHSTLQTCNISTL/M/LGHIPG LWILNLSEPWDATPVWHFVKLLTKLT HHACRASGNIFAIVSLVTLITSAVMSSVA LHSSVQMAQ
3579	11630	A	4500	1	822	
3580	11631	A	4501	158	668	
3581	11632	B	4502	151	336	ANSDSMVGYVLGPFFLITLVGVVAVG GPAAHLLPMYSYDPAEELHEAEQELLS DMGDPKV*
3582	11633	A	4503	748	949	
3583	11634	A	4504	1139	1241	
3584	11635	A	4507	41	488	
3585	11636	C	4508	187	342	MICKNKNKVILLXXXXXXXXXXXXXGG AXXXXXTTPRRRGKKQFFLPKQ*
3586	11637	A	4509	1304	1434	
3587	11638	A	451	126	373	GRGTSKILMALQORTHSLLLLLLTLGLG LAYPSYGHVLYHRVVADNGHLEETLV MDRCLSVMILLRIISRDDCERLIGLA
3588	11639	A	4510	1	1383	
3589	11640	A	4511	1	674	
3590	11641	A	4512	19	249	
3591	11642	A	4513	1000	1174	
3592	11643	B	4514	60	378	NAVLEADFAKRGYKLPKVRKTGTTIAG VVYKDGIVLGADTRATEGMVVADKNCS KIHFI SPNIYCCGAGTAADTDMITTLQLISS LAAMAVFEDKFRPDMEEEEAKNLX*
3593	11644	A	4515	1	437	DPRATEGMVVADKTCQKSTGRLPVLT AIRMLKQMLFRYQGYGAALVLGGVDV TGP/HLYSIYPHGSTDIAAGIFNDLGSNS IDLCVISKNKLDLFRPYTPVNKKGTRLGR YRCEKGTAVLTEKITPLEIEVLEETVQT MDTS
3594	11645	A	4516	1	1059	
3595	11646	A	4517	1115	1307	

3596	11647	A	4518	3	866	FLGKMAAVSVYAPPVGGFSFDCNCRRA VLEADFAKRGYKLP RPRTGTITAGVV YKDGIVLGADTRATEGMVVADKNC SKI HFISPNTYCCGAGTAADTAMTNTQLISSN LKLHSLASTGR/LPRVVTANRMLKQMLF RYQGYIGAALVLGGVDVTGPHLYSIYP HGSTEKVPYVTHGFLAPLAAMALFER* V*APDMEEEEAKNLVSEDSPPQFPSPSW RIFNDLGSRKPNIDPLPSSARNKLGFSPP HTQLPNKKGTRLGW/RYRCEKGTTAV LTEKIPLLWST
3597	11648	A	4519	4	181	
3598	11649	B	452	1	1812	MPSPSPLFFVATIHDCELETTETGSPD LQDVPLEKADATVFTDGSSFLEQGVKA GAAVTITETDVLWAHALPANTSQAQKAE IALTQALRWGKDINVDTDSDRYAFATVHV HGAICQERRLLTSAEKAIKNKNPPSSKPN RSSSLGNNLRPDGSMYMHRSKGVPVAV SVNVNLTPESESLNLESSCVTKLSPEKEI YEMESLQWENMGKRINHHLQYNGLD NMECKGNLEGQEASQEGLYMCVKITCE EKATESHSTSSTFHRIPTKEKLYKSPNPS QDTGYSQHHTRTTFSKRQPKNCERFPVE GRPLTLPAQTSXGYSKPDVITLLEQKG EPCVVARVDVTRRQCPAAPMVDLIARV GVMARGNAITLPVCGRDVKFTLEVLRG DSVEKTSRVWSGNERDQELLTEDALDD LIPSFLTGTQQTAFGRRVSGVIEIADGSR RRKAAALTESDYRVLVGELDDEQMAAL SRLGNDYRPTSAYERGQRYASRLQNEFA GNISALADADNISRKNITRCINTAKLPKS VVALFSHPGDYLPVPQAKGNNVITSY MTNRGFFEDKKATFAPSFLMNKGNKTS VVKNSILEQQQLTVN*
3599	11650	A	453	305	1088	NHWPMHLVTFRDVAIDFSQKEWECLDT TQRKLSRDVMLENNNLGLTG/SDILGS KPVVITLLEQGKEPCVVARVDVTRRQCPG LLSRHKTKKLSSEKDIHEISLSKESIIEKSK TLRLKGSIFRNEWQNKSEFEGQQGLKER SISQKKISLKKMSADRKRPSFTLNQRIHN SEKSCDSHLVQH GKIDSDVKHDCKECS TFNNVYQLTLHQIHTGEKSCCKEKGCGK VFSSHYQLTLHQRFHTGEKPYECQECGK TFTLYP
3600	11651	A	4538	1511	1687	
3601	11652	A	4539	425	619	
3602	11653	A	454	1	2088	
3603	11654	A	4540	122	621	
3604	11655	A	4541	2315	2790	AATTPALRPLRRSSFLMATTITKASTGT WSSSPSLPTPPPTSTLRKAPTTLIQKWRP GAQQPSCPKPRS*PSSSTPRTGPPIGTSTS EPMITTQWP*STPSMR*LPPALTHPRSCVP SRTAAWVLGWYATHIERWLSAYS RQPD SGLGWQTCFAQNLPK
3605	11656	A	4542	645	766	
3606	11657	A	4543	294	502	
3607	11658	A	4544	969	1158	
3608	11659	A	4545	147	402	GRGIQLFHEIQLQLSKTLCEPAVPVQRLR GRTAARWPGSRESPLRPVFDVEYCGVLI FIILFI*WRHFHSLCWSGDDIILACLL
3609	11660	A	4546	240	433	
3610	11661	A	4547	3	310	GGQPPHPPAARPGGRWGCQPPARQPLRP GGSVSTGTGFPGRWQPETSWVSCRHC GPHLSAVWGLPR/LSPLPAGPNRPQQLS EFPRPKEFLTPTQKTKPN
3611	11662	A	4548	3	195	WPPGPLQPRGTEHRPPTDTPRAARSTR SHSPSEPRTRTPWQQR*LPRPSKPSHGPD VIEAA

3612	11663	A	4549	1	1439	
3613	11664	A	455	140	511	PTQSTRRIATVSIAAAVAPLTLFLYRGDG GLSSRRRADAAGG/APFSLCGEVAVKPPI NPFTELMENA VNDGSHSEELFCHLKTIS QKED\LTRCT\SESHLSWYSHQYQGKSKF PILGFPVLSII
3614	11665	A	4550	292	573	
3615	11666	A	4551	376	456	GEEPTSVF*RNQWNL RPHKHFGNASPW
3616	11667	A	4552	1663	1984	
3617	11668	A	4553	1735	1868	
3618	11669	A	4554	138	279	
3619	11670	A	4555	72	192	
3620	11671	A	4556	571	690	CQQGFSFLQAYGPAQHAISMRKFKAKY PDYEVTWANDGY
3621	11672	A	4557	130	943	
3622	11673	A	4558	45	405	GIPGRRNMAVADLDLIPDV DIDS DG VFK YVLIPSPLGIPAPGIRPAESKEIVRGYKWA GHADIYDKSVGATCRKQGLRTV SILG GGRIS/HTKSPGQERFTVYGYSMGLWSC PRTPIST
3623	11674	A	4559	613	866	
3624	11675	A	456	1	1014	
3625	11676	A	4560	69	430	
3626	11677	A	4561	144	294	
3627	11678	A	4562	13	759	
3628	11679	A	4563	177	328	INAH LKFKVYFLSQAPLKCTWK TSAARE NHV*LTFLMFYGT LGTGVCFC L
3629	11680	A	4564	218	343	
3630	11681	A	4565	708	916	
3631	11682	A	4566	829	1002	
3632	11683	A	4567	51	209	
3633	11684	A	4568	8	218	
3634	11685	A	4569	3	357	
3635	11686	A	457	577	2195	IMGCVQCKDKEATKLTEERDGS LNQSSG YRYGTDPTPQHYP SFGVTSIPN YNNFHA AGGQGLTVFGGVNSSSHTGTLRTRGGT GVTLFVALYDYEARTEDDLSFHKGEKFQ ILNSSEG DWWEARSLTTGETGYPSNYV APVDSIQAE EWYFGKLGRKDAERQLLSF GNPRGTFLIRESETTKGAYSL SIRDWDD MKGDHV KHYKIRKLDNGGYITTRAQF ETLQQLVQHYSERAA GLCCRLVVPCHK GMPRLTDL SVKTKDVWEIPRESLQLIKR LGNGQFGEVWNGTWNAGNTKVAIKTLK PGTMSPEFLEEAQIMKKLKHDKLVQLY AVVSEAPIYIVTEYMNKGSLLDFLKDGE GRALKLPNLVDMAAQVAAGMAYIERM NYIHRDLRSANILVGNGLICKIADFLAR LIEDNEYTARQGA KFIKWTAPERALYG RFTIKSDVWSFGILLTELVT KGRVPYPG MNNREVL EQVERGYRMPCPQDCPISLHE LMIHCWKDPEERPTFEYLQSFLEDYFT ATEPQYQGENL
3636	11687	A	4570	2	217	ECGDVCDTGDRASVDEEGYI WFLGRSH HTINAS/GVVKALIVLTPQLSHDKDQLI KELQQHVKS VTAPCIGC
3637	11688	A	4571	1	846	
3638	11689	A	4572	361	916	
3639	11690	A	4573	128	416	RQVLLFWGRGKYHNPFSCLYPFSAFLG EGQVPLNPFSFTLSGKSRFSRGQEP/LNPL FPHPDLLSVCNPLFPHDPFPAFLEGKN PRTPRTRGST
3640	11691	A	4574	127	135	NKIVLKCWGGENFWGVVWRENGRCFS GLLQAGLGAAWEPRVG/IVRRNICCIE*L VMAWIRFCMN*KTK

3641	11692	A	4575	35	386	QLKTDTAQSPRSPLDHHGHRASGNSHSG SIHPDGLK*LKNHKRSEKPCPTLTDDIPP QKKCKWPVLALSADITL*KSFSWLILAQ KAPPLSTL*PPLLPAEQMSFDCNFPPLPT QIL
3642	11693	A	4576	148	336	IRTPKIGLFNSPGSHSQSPWNSGPRLSD/ WTPSQIFSA*QLKTDAAAGSPRKPPRPSRT PSFR
3643	11694	A	4577	4418	5130	DTISYQLEWRSLSQETTDQAPMSSL*NF LRSNPWLS*RLGA*/WNADEQGVPLIQE MLESWASICKVPKYPNAEAVRPEEQTPH LHPGEINSHVAHTKL VWWSLHTDTHEI WCRDSDRGTSLSGRSIPCPPALCSVRKIHL RPQVLRPTSPRNISPISNPHTRT/SQTPEPQ RPGVPEPPSPGACYKCKQSDHQAKECL QPRIPPKPCPICAGPHWKLDCAHLAATL RAPGTLAQGSL
3644	11695	A	4578	522	923	PSAAGLLEFAGGLOTLFAWVSAAEAAE QRVLLNSQ/WLLPDRSSGSFVSGSIWPCE VSVCPSRCWRPRRKPLEAHLVQPQPPT LLAPVLVLLAVCYGWSRPLAHTLFAAS RLAHHGVDQRNNLVDKAQILN
3645	11696	A	4579	1	569	MGKKQNRKTGNSKKQSTSPPPKERSSSP ATEKSWMENDFDELREEGFRRSNYSELR EDIQTKGKEVENFERNLEECITRITNTEK CLKELMELKTKARELCEECRSLRS/LMRS TGRLLIKKTPFSSG*SRI*FNN*ASNLY* NINSNKSPL*PLKGPILSKPSASNIPCLQ WVQAFQKSESLPAPR
3646	11697	A	458	561	966	GALCAASVPRCVWSSAGVVALFEEHCA PLVWVYTYECCHYMCSALLSLSCPCPAP SERAAGLCCRLVVPCHKIGMPRLTDLV KTKDVWEIPRESLQIKRLGNGQFGEVW MGMLRLNYSLSIFPVWKIPNTKDGR
3647	11698	A	4580	23	660	FIDSMPPSPRYQ*LSSQNWKLL*SSYGT KEEPASPSQS*AKRTKLEASHYLTSNYTT RLQ*LFQKHTMLSPRENLTQPACTQVK* TAMLLTQ/RPVWWSLHTDAHEIWCCDS DRGTSLSGRSIPPPALCSVRKIHLRPQVL RPTSPMNISPILNQLSSLRLTLPDRLRSPL DHHGRRASARLHPGEINSHVAHTKPVW CSLHTDTHENDKNKQ
3648	11699	A	4581	1	764	MIQEHADKQVQRLQGVLGSIPTAASRA RLHPGEINNHVAHTEPVWWSLHMDAYE IWCGRSDRRTSLGRSIPPPALCSLRRHIL RPQVLRSTSPRNISPISNPGHLSDYTPTFQ GCQTMQGRLPWSFTLSGKSRFSGEGATQ RQYPIPQQALKGLMPAITRL/STAWPFKA YKLSLPFPHTCPKTRQALQVSSGSAPYQ PNCFAYPFHGAKPIYSSILNTCLYNPLFCS RSQTSFLYYSFAPFIPASLRHLD
3649	11700	A	4582	1	400	MWNAVTLWQQRESCIEEIEIGTLETKE THFIRGPKTLAPVTDWEG/SPSLGV*SMQ GRLSDYTPTFQGFQTTQGRLPWSFTLSS KSCFS/AGRGKLLARPS*VPILPQPLLLH PTILLSPPLTPGQAYSFIP
3650	11701	B	4583	1	933	MEEKEERKRRRKRRRREGRDGERKR MEKQKENQDPKDPPTTSGPQTDQPKKH LTNFKSETKETRFIRGPKTPAPVTDWEGS LPLVFNHSRDTSLIHPGFRGVRPRRDAC LGPSPLAASPTFLGKGPAAPRQTELGPNS SSASAPPPYNPFIASPPHTWSGLQFPST SPPPPAQQFTLKKVAGAKGIVKDLINLTF KVYNRRKKLQFLASTVRQTPATSPAHK NFQTPELQQGVPEPPPPRGACYKFQKS GHRAKECLQPRIPPKPHICVGPHWKSD CPHTLAATPRAPGTLAQGSLTPSQIFLA*
3651	11702	A	4584	1	582	

3652	11703	A	4585	1	622	MAKSFSGSGKSVCKSPKGKNNWTETRM IGDGGGLQEGSLTMKFEDGKYLFGFNIEG DFCEDSNFQTGESVSDVYFENVSAHQRE STGSGIAQERNDEGLESGRAVLCIEECLS ASLASTSQSSIEQPLTSSPTKTKQNMTP DIAEYPQWAIWTSKTTTTVLRPS*VLILP QPPLHPIIFLSPPLTPAPAYSFIPPSQTPTS FG
3653	11704	B	4586	102	1151	MEEHFMLMGSKNQYRENGHTAQEKLL YAFHNISLKQSSLSLSQNFNNENNDGS KDDDDGGDDDDDCQASEAKPNSACLHP GEINSHVAHTKPVWWSLHTDTHENDNG DVGGDDNVDDVDGDDGDDGDDGDD DDGDTVMMVMMIMMMVLMVMIVVV VVVVVVVVRKAFLFLINGEESLESLT GFANIPNHHLTVQHIYTPILPSGETKETR FICGPKTPALVTDWEGSLPLVFNPCRDA LIIQPRFKAASPAILGEGQVPLNPFSTLS GKSRFSGEGARAYYKCRKSDHQAKECP QPRIPPKLCPICAGPHWKSDCSTHLAAAP RTPGTLAQGS LTDSFLA*
3654	11705	A	4587	258	479	TAAARRSSRTSSHRSLHVPFIWPLGQG MPAARDSS*AASHLCRTTPKIGLFNLPGS HSQSPWKSQPRLS*LLPRSSRLSS*RAL GQISRGSGSGCQVS
3655	11706	C	4588	259	531	MSPAHNKFQTPPEQRPPIPPEPPPGACY KCQKSGHQAKECLQPRIPPKRPICAGPH WKLDCPHTLASTPRAPGTLAQGS LTASQ IFLA*
3656	11707	A	4589	1	446	MNLNRNALVLTLSFDSARLHPGEINSHV AHTKPVWWSLHMDTHEIWCRRSDRGTS LGRSIPCTPVL/VLSRFKKIKACYHSPATS WPFKTYKLSLQLPHFTCPKTRQALQVSS GAVPYQPNCFAYPPCGAQPVPSFVLNTF LHNSLCRA
3657	11708	A	459	46	949	ARRPRPWLSSARTPRRPFWRPPSCCSPM LTTSSSETLMMKNIDPSGLETQPF/YEVLQ SNIQHVLVYENPALQEALACIPVQELK RKSQEKLSRARKLDKGINISDEDFLLLEL LHWFKEEFFHWVNNVLCCKGGQTRSR DRSLLPSDDELKWGAKEVEDHYCDACQ FSNRFPYNNPEKLLLETRCGPWCE
3658	11709	C	4590	228	260	MFLGLVGLRT*
3659	11710	A	4591	268	390	
3660	11711	A	4592	1	499	MAPTNCKGSRKCGRPHEQMHPHYLPLL TLFSDSARLHPGEINSRVPHTKPVWWSL HTDAYEIIWYHSDWGDLPWETIPCPA LCSMRKIHLRPQVLRPTSPRNISPISNPEK *NGLKVF*KHTSPSSATNLKRPQGYFYH FPFSEFRPVLGMLQVTSFAQKFTLL
3661	11712	A	4593	1	355	MEVYTQKAYWRVPLGSTVGDDGGHGR FIHPFAIKIEQGSTNRCPSGSPATKYVLLC LHGEKVDLLPADQQSIFSPGRSTQGHLSI TGVLMNRHSTYMDKEKVKMVTALWTD EELSKLTWTRMKFDAMTQLGDLPEIN PLSSCSLLREKDPPTSGPQTDQPKHELT NFKSTTNHAPLTIPLKPNHSPYAEQYYPV PQHALKGLKSIITRLLQHGLLKPINCPYN SPILPVLKPKDKAYRLLQDLRLINQIVLSIH PVLKPKNTLLSSIPPSTTHYSVLDLKHAF TIPLHLSSQPLFAFTWTDPDTHQAQQITW AVLPQGFTDSPHYFNQAQISSSVTYLGH LMKTHVLSLLIVSG*ESIWFVQHGVDRO NNLVDKAQILK
3662	11713	A	4594	260	487	AQACMYTSRWPEATEEPQKK*KWLVPAL LTDDITL*HSFSGTVSLRSSPLSTL*PPPLP AREQPPLTVIFHHLPKS

3663	11714	A	4595	1	508	MNMNIKKIVKQATVLTFTTALLAGGAT QAFKENNQKAYKETYGVSHITRDML QIPKQQQNEKYQVPQFDQSTIKNIESAKG LDVWDSWPLQNADGTVAEYNGYHVVF ALAGSPKDADDTSIYMFYQKTA/PSPGQ A/TVPILPQPPLLHPILLSPPLLTSPAYSF VP
3664	11715	A	4596	1	1246	MGKGRRSLWLLPADGGSSGNGNELQGT SPHDYFSIAIKSTHIGLEYPTSRQSNRVSP QSKRIRQPLGLPSGSITERGPPNNRQKGY TRQQFCHESTPNKGDRVIYNLTCLLYCC VRFPLAGTGPHILYLSRLASNLELFKRDK GRGEQRKEEVTCFHKLLAEKENNPPFSFI YPNPIKRPHPYLPSLTLFSDSAHLHPGEIN SFMAHTKPVWWSLHTDAHEIWCRCSDR GTSLGSRILRPPALCSMRKIHLRPQVLRLI SPRNISPISNPHALKGLKPVITRLLQHGLL KPINSPYNSPILPVLKPKDPYKLVQDLCLI NQIVLPIHPMMPNPYTLLSSIPP/CHNPLF CSGSQTCFLYYSFVPVIPASLRFHLD*P*H SS/WFSKLPGLYCRKASQTAPITSVKPKF HPHLLPISA
3665	11716	A	4597	182	750	KWPYCPSSAGQQTQLCSSSTNSNCLPY RGTSLSGRSIPCPALCSMRK/MPPTSGP QTDQPKKHLTISNPVAEAKGIVKVNAPF SLSDPPKIS*RLGSFSSNHPYLGQRQYPI QQALKGLKPVITCLLQHVLLKPVNSPYN SPILPVQKLDMPYRLVQDLCLINQIVLPI HAMVNPNETFIPLTVLNP
3666	11717	A	4598	3	504	KRPHPYLPLLTLFSDSAHLHPGEINNHA HTRPVWWSLHTDVHEIWCRCSDQGTTP WEINPPSSCSLLREKDPPTSGPQTDQTK KHLTNFKSGKRPLFTVPSPTSLTIPQLSPF NLGATLQSLPSLNFNSFHFLVFTKETCFI HEPKTPAPVTDWEGSLPLVFNHC
3667	11718	A	4599	1	1032	
3668	11719	A	46	105	328	RDLHMKTITTSKVY*LTTH*SGSVGRDYE LHENPLVGPNIKLGDFVDISHPNDEYSPL LLQVKSLKEDLQKETIS
3669	11720	A	460	3	284	
3670	11721	A	4600	72	724	FQIAGKWHFQFFHPTRSK*FLS*N*QMV* GA*CPGILLHISPLVSVPATRPKSSFFPS HLSPQYQPVLSLSNLPLQTHVTS AFL PRLLLARPS*VPS/RSSASA/LSTLQSLYHL PSSHLVRLTVSFRDYPSTCPAIYS*KGG WSQRHSQG*CSF/SLYPKSDSV*ALFHQI* KSSPVHGSFGSNPKTLYSPSP*KVKRPSY SQYTFYYPICSRH
3671	11722	A	4601	2009	3197	
3672	11723	A	4602	3948	5007	VLQTFASVTAHKGGTPRVVCSQWVR GLADFRNEAADPHDQGMENPTDFLER LRGALVKHMSLSPDLVEGQILKDKFIT QAAPDIERKLQKQNGPSLRDIFFSPQNGY NWRMASFYLPVANKWKILKSLYQILHL GPDWEGPYTVFLSTPMAVEVTGIDSWIH YTQVKAWKADGATSVNPEEHPKYQGEI NSHVAHRKPVWWSLHTDVNEIWCRCSD RGTSLGKS/HRSSCVLCSVRKIHLRPQV LRPTSPRNISPILNQELATRA/VKSGH*AK ECLQPGIPIKPHLICVGP*KSDCS/TSPGS HSQSPWNSGPRLSD/WTPSQIFSA*RLKT DTARSPQKPPRPSRMP SFR
3673	11724	A	4603	567	678	
3674	11725	A	4604	1	305	
3675	11726	A	4605	3474	3657	
3676	11727	A	4606	796	937	
3677	11728	A	4609	664	1059	
3678	11729	A	461	420	690	

3679	11730	A	4610	775	944	
3680	11731	A	4611	279	416	
3681	11732	A	4612	36	4704	
3682	11733	A	4613	124	672	
3683	11734	A	4614	688	940	
3684	11735	A	4615	561	663	
3685	11736	A	4616	217	378	
3686	11737	A	4618	198	347	
3687	11738	A	4619	201	424	
3688	11739	A	462	557	753	IIEIGIMEQRKPWKKICYFICCASHAKGSL /CRRMKRAPVYYYGRTVPSPDGSAHGEY HVLLELNT
3689	11740	A	4621	305	440	
3690	11741	A	4622	936	1380	
3691	11742	A	4623	9	1230	
3692	11743	A	4625	942	1293	
3693	11744	A	4626	40	154	RCWLCPHALFLWLASHLCHFYTFCVQ AEC*VMPPHPL
3694	11745	A	4627	4	436	
3695	11746	A	4628	465	748	
3696	11747	A	4629	92	393	WPRSGPLRLLRTVCCCVLPLLSHSLHKI SVSAPGP**QIPPPFQNRSFSCDTERG*GG ETPLVPGKFSSPHQTL*GTSSGRTGSAG QLPLL YLSYKTR
3697	11748	C	463	137	274	MRKQLLLPQKKRRVYLLRITKKVEMIPQ DNENPGNTNCHDVVLVQ*
3698	11749	A	4630	1	1614	
3699	11750	A	4631	1	410	KGKVKEAAQRYQYALKKFPREGFGEDL KTFRELKVSLLNLSRCRRKMNNSSSC VHILSSRQFAAALEDLNEAIKLCNNREI QRLLLRVEEECRQMOPPPPPPOPPQ QLPEEAPEP*RT*TRPSSCVPTTVRSRDF C*EWKKSVD/TMQPPQPPPPPPQPPQL PEEAPEPQHEDIYSVDIFEE
3700	11751	A	4632	1	972	
3701	11752	A	4633	196	390	
3702	11753	A	4634	2	4417	
3703	11754	A	4635	158	358	
3704	11755	A	4636	4	152	
3705	11756	A	4637	382	458	
3706	11757	A	4638	46	314	
3707	11758	A	4639	46	271	
3708	11759	A	464	1	2155	MKKKKMKEEEEKEKKEEEEEEEEEERR KEEDDFCNRTSPAGGSEGPQGESEQPAQ PPEQAGGRPGASPAPDEDAEAAGAEQG GDSTEATAKPKRSFYAARDLYKYRHQY PWKLSQFHSSVSHRRKEIDCKAFKWQDL AFFGELTRGKRSQHNYLRITRILKSLGEL GYESFKSPLVKFILHEALVENTIPNIKQSA LEYFVYTIRDRRRERKLLRFAQKHYP ENFIWGPPRKEQSEGSKAQKMSSPLASS HNSQTSMHKKAKDSKNSSSAVHLNSKT AEDKKVAPKEPVEETDRPSPEPSNEAAK PRNTEKDSNAENMNSQPEKTVTTPEKK ESVSPENNEEGNDNQDNENPGNTNCH DVVLPRSPAPAAASSMGNLLGGVSFREP TTVEDCDSTWQTDSEPEPEEPGPGGGSE GPGQGESEQPAQPEQAGGRPGASPAPDE DAEAAGAEQGGDSTEATAKPKRSFYAA RDLKYKYRHQYPQNFDIRYQNDLSNLR YKNKIPFKPDGVYIEVLSKWGDYEKL EHNHTYILWLPLTEQGLNFYAKELTTY EIDESSKTKEAIRFPFWAYKNDARIFWN KT/GLIKLGMFARGVYWQESFQHLNESQ HNYLRITRILKSLGELGIESFKSPLVKFIL

						HEALVGGILFPILRQSALAEYFVYTIRRTG RRKGRKA/LCGFAP/WKHYTAFQGNFIW GDPPSEKEQFGGGGQRPREM
3709	11760	A	4640	1	1815	
3710	11761	A	4641	1	1284	
3711	11762	A	4642	1	1650	
3712	11763	A	4643	1	1605	
3713	11764	A	4644	303	410	
3714	11765	A	4645	92	395	HHHSLTVTLSPFPCKKPLPPMKAKLV EERKRNARG*SAKRRKMRQRSQVNPPSF VAPVEATQEHETWNAQTLGMLGTSCGT ACYCLELVSMGSRSSAL
3715	11766	A	4646	362	497	
3716	11767	A	4647	609	701	
3717	11768	A	4648	1	104	TYV*PSVFKVN*HPT*SSS*HRKDQTDIL NAINQ
3718	11769	A	4649	1	1398	
3719	11770	A	465	226	486	NWTKIITSMCLWGNASFGQLGLGGIDE EIVLEPRKSDFFINKRVRDVGCGLRHTVF VLDDGTVYTTCGNDLG\QLGHEKSRKKP EF
3720	11771	A	4650	1	1149	
3721	11772	A	4651	3	242	
3722	11773	A	4652	213	658	EGPARHRLSPVRASKMTTKRRNNGRA\ KKGRAPRQGTAPLKIFPSGPLPPNCARCV P/RRDKAIKKFRHSET*WEAAAVRDLSE ASVFDAYL\PKLYVKLHYCVSCAIHK QK*SGNRSS*SPAKTRTPPPRFRPAGCW PHGPPTKSP
3723	11774	A	4653	161	295	
3724	11775	A	4655	355	476	
3725	11776	A	4656	662	979	
3726	11777	A	4657	960	1387	
3727	11778	A	4658	696	996	
3728	11779	A	4659	240	461	
3729	11780	A	466	674	1026	LWAEGTLVWGSIREWLQHTPPNGIRDW AKQRMWRTGQPAPTRVNISRPSPTPF PRFTTKLMWALGTDPFTHTHSHSFAH IHSCTHA/HVQEHTYTYSLPHTSRPFLKG SKSTPKP
3730	11781	A	4660	2939	3295	
3731	11782	A	4661	44	319	
3732	11783	A	4662	2	896	
3733	11784	A	4663	68	438	
3734	11785	C	4664	208	345	MSPDRNIECKATGFTETTTIYDLLFCKSVD SFYQLLISSSGKSIT*

3735	11786	A	4665	1	320	
3736	11787	B	4668	1	651	MQKEDCVIVLVKLAVEGMAPTQQIHLF VAITFSGWPRQCTGSSFKAIDLFLDPDSV MQQIYSFHFGIMCNFDNHAFQNLMAVID NIKQDRDMDEAGSHSQQTNTGTGNQT PHVLTHKWELSNENTWTQGGEHHTPGP WVLGLADFKNEVVDPHGVKPTFTVSV TALKDDVSGIHSFLLVGSWSANFRNEAA EPSALFTIAKIWINLSIHQQMNG*
3737	11788	A	4669	1	112	
3738	11789	A	467	153	380	PRSWGQDTPSRGERSPNSSGTPGLPPPG GHPFPSQPVRPQLLPPTPDLGPGGGQAG IQG\PSGSPTQDGANSRL
3739	11790	A	4670	474	616	
3740	11791	A	4671	197	334	
3741	11792	B	4672	82	402	MGLEKLHPFDAGKWGKVINFLKEEKLLS DSMLVEAREASEEDLLVHTRRYLNELK RKVLRPLRTQTGGTIMAGKLAVERGWAI NVEAIXRKVELEWGTEDEYLDK*
3742	11793	A	4673	1	1524	
3743	11794	A	4674	39	786	
3744	11795	A	4675	434	1333	
3745	11796	A	4676	772	1107	
3746	11797	A	4677	282	377	
3747	11798	A	4678	233	459	
3748	11799	A	4679	761	962	
3749	11800	A	468	140	754	TAMSSEEGKLFVGGNLNFTDEQALEDH HFSSFGPISEVVVKDRGTSSGPGGFGFI TFTNPEACFKLPMKKPMNRRSLEWSVR SRCWIMQAKSASGEPEGGGLGAHWGL GSQLTFFKKVVGPGGLIGELSFAMRAMN GESLDGRQIRVDHAGKSARGTRGGGFG AHGRGRSYSRGGGDQGYGSGRYYDS\W PRGYRYRYGRSRD
3750	11801	A	4680	3	190	
3751	11802	A	4681	150	338	
3752	11803	A	4682	168	375	
3753	11804	C	4683	55	444	
3754	11805	A	4684	64	322	
3755	11806	A	4685	2	38	
3756	11807	A	4686	185	451	SOHFGRPRQVDHLRLGVGDQLDQHGET PSLLKIQNWPGVVAHACNPSYSGG*GRR I/RLTLGGGGCGELRSCHCTPALATRAKL RLKKKK
3757	11808	A	4687	344	468	
3758	11809	A	4688	204	286	
3759	11810	A	4689	206	395	TFCLVFFQFSYNFQLVPVFNTALVC*RH* LIAFLNLRII*F*YKYISYIFVKL*QNQISKP WF
3760	11811	A	469	2	259	GGNDLAFPH/HENEIAQCEVFHQCEQWG NYFLHSGHLHAKGKEEKMSKSLKNYITI KPSTTVTAPCSKLSSCSWGWALSWRTH VPT
3761	11812	A	4690	2112	2221	
3762	11813	A	4691	116	382	
3763	11814	A	4692	11	666	
3764	11815	A	4693	47	241	
3765	11816	A	4694	246	485	
3766	11817	A	4697	3	728	
3767	11818	A	4698	825	941	
3768	11819	A	47	1478	1732	GGQGRWITRSVQDPHGQDGEKPSLLKI QKLARHGGRRRL*SQLLGR/LQENCLNL GGGGCSEPRSHPCPAWVTEQDSVSKK KKK

3769	11820	A	470	198	353	
3770	11821	A	4700	1	299	MALRKNEVFEGWDGRKGVSHGEGCFSK GSNIGAYLGKSQEQFEGNIRGNRQIIVNN ESKLIKISEEDLTTPMRQRSNTLPKSFGSQ LEKEDEKKQELVDKAIKPSVEATLESIQR KLQEKRAESSRPEDIKDMTKDQIANEKV ALQKALLYESIHDRPVTKNERQVMKPL YDRYRLVKQILSRANTIPHVSRIPSRGWY NTFP*CPQGGCFPLASPGASSE
3771	11822	A	4701	1	238	
3772	11823	A	4702	1082	1436	
3773	11824	A	4703	126	417	
3774	11825	A	4704	867	961	
3775	11826	A	4705	3	242	
3776	11827	A	471	103	483	NTAVSTTVAGSCLASESAGAPLPSALSV GLGVPAPWNKGRSCLPGRPSTGEDLGA DFIPNPTLGLYIGNVQVPIRFLGSHVSLR PESLLTQLRLNAFVFSGLHAKGKEEK MSKSLKNYITIKKK
3777	11828	A	4710	244	318	
3778	11829	A	4711	1	1605	
3779	11830	A	4712	1	816	
3780	11831	A	4713	395	1374	KVTLMRWLYKG*NSGPMVS/TEEMDLAI EASEMIVLQSLHKYQPRHIVEVNDGEP EAACNASNTHIFTFQETQFIAGTAYLNAE ITQLKIDNNPFAKGFRENFESMYTSVDT IPSPGPNCQFLGGDHYSPLPNQYPVPS RFYDPLPGQAKDVGSSRVNREVSDF ADFGTTIKQDFRLLGQTSVDRLLQLSQG QAVKGNQLLPVSLVKRKTTLAPNTQTAS PRALADSLMQLARQVSRLESGQDFADF GTTIKQDFRLLGQTSVDRLLQLSQGQAV KGNQLLPVSLVKRKTTLAPNTQTASPR LADSLMQLARQVSRLESGQ
3781	11832	A	4714	1	2109	
3782	11833	A	4715	251	623	
3783	11834	A	4716	36	69	
3784	11835	A	4717	328	441	
3785	11836	A	4719	560	688	
3786	11837	A	472	98	1339	GLRAAQAWAPRCRPRWALGGLGGTGL RSLASGGRGRAWLQPTGRETVGVQVYN SLTGRKEPLIVAHAEAASWYSCGPTVYD HAHLGHACSYVRFDIIRRLTKVFGCSIV MVMGITDVDDKIIKRANEMNISPASLAS LYEEDFKQDMAALKVLPPTVYLRVTENI PHIISFIERIARGNAYSTAKGNVYFDLKS TGDYKYGKLVGEVPGVGEPADSDKRHA SDFALWKAAPQEVFWASPWGPGRPG WHIECSCLASNGIWKVNLDIHSGGIDLA FPHHENEIAQCEVFHQCEQWGNVFLHSG HLHAKGKEEKMSKSLKNYITIKDFLKT SPDVFRFFCLRSSYSAIDYSDSAMLQV SSCSWGLGSFLEDARALHGRGAAGLRL RQGS DAVGEALQHQEGREGGLGR
3787	11838	A	4720	245	382	
3788	11839	A	4721	235	425	
3789	11840	A	4722	253	363	
3790	11841	A	4723	235	320	
3791	11842	A	4724	1	1326	
3792	11843	A	4725	2	1502	

3793	11844	B	4726	144	2704	XHGSVVVWDLREDSRLHYSVTLSDFGW TFRTATFSTDGILTSVNHRSPQLAVEPIST SVHKKQSFVLSPFSTQEEMSGLSFHIA DESGVLNVVVVELPKADIAGSISDLGL MPGGRVKLWDSSTDHAVTGLQWSPTR PAVFLVQDDTSNIYIWDLLQSDLGPAK QQVSPNRLVAMAAVGEPEKAGGSFLAL VLARASGSIDIQHLKRRWAAPEVHSCVE RKWSGHTASRVHTHSPSLLFCNPLDD WSRSFETEAPKHVVFFEPYRNVKFKK ETSKKANDLPLSLTPREELARCLWAPPSP SVEGPMATAEAVPWNESSHSSKGRREGPE PHRRSSAEQEVQAARLQGKERKARGE HGRSIKGRENGAKQDKPRQAPPTVSFR QSPSPRESAHSSGTRFQLGCSHTELTGG HLASLCDYLLQTPRPGVPEHRASPGSKC TRHSHSHTLGRGEGVVCTCPSATDTPQV VERESNPLDEVRRGHAGEHRLLSQSLST VGAESSKSTGWAPLNAPVRTFLGESLG SAFSSASIALRTSVKRRHKWARPHTNGA RQPPGGKGTTPGGKEHPYEIKAPPCVSR WLSSPPPGTPSCTTVRRSWLPSALKHCC VLRREMAVCHRLSKCPANAIVKHPCEG KSPPYRALWHRSGVWTVAGTQSPNIR AHRDQTLRNNYITILPNGNWRHGAYAG VSSFSRX*
3794	11845	A	4727	8	3281	
3795	11846	A	4728	162	347	
3796	11847	A	4729	201	522	
3797	11848	A	473	414	833	NVLVICQRNSNSFKLKFVRDDGEQTQQ DFSALQ/AS/SQGRPELVHSGVQGGPW HQPPWVCQNPLAKAAFTALLVLESLREE ERTVTAEGAPLSPGGPHTSPSPGRDAGG SNLGTFSRSYSQRLEFLSSRKLCLNINCKL S
3798	11849	A	4730	205	424	
3799	11850	A	4731	343	500	
3800	11851	A	4732	103	361	
3801	11852	A	4733	1097	1298	
3802	11853	A	4734	874	1184	
3803	11854	A	4735	451	641	
3804	11855	A	4736	1	1215	
3805	11856	A	4737	1	417	
3806	11857	A	4738	19	345	AATLGHCPSIIQCWRSAGSCPRASSGPQ ASPMWV*STDLR*MSWATSLQGWCPCQ WPPTPSCSQSSWAA\HHRCGWVCHCH LTGEDLRPEARLPGGQQPGAGGPGPQ
3807	11858	A	4739	40	209	DGRCSQWSRRLQGPWWHTEGPGPAS ARLPQHPGPGCPLLCGHCVPQEPEEYFP *LPQHPGPGCPLLCGHCVPQEPEEYFP
3808	11859	A	474	635	901	PHPEPKGPKLRA\PLSPDFPPGSRLAGSP GA\PPPPHPEDRLHQGSSHPHPIRLLER SLAQGGAAPLGPPRMPHGAAPQGCSPT PT
3809	11860	A	4740	2	4097	PCPPHADCRDLWQTFSTCQPGYYGPGC VDACLLNPCQNQGSCRHLPGAPHGYTC DCVGGYFGHHCEHRMDQQCPRGWWGS PTCGPCNCDVHKGFDPCNCKTNGQCHC KEFHYPGRGSDSCLPCDCYPVGSTSRSC APHSGQCPCRPALGRQCNSCDSPPFAEV TASGCRVLYDACPKSLRSGVWWPQTKF GVLATVPCPRGALGLRGAGAAVRLCDE AQGWLEPDLFNCTSPAFRELSLLDGLE LNKTALDTM
3810	11861	A	4741	2	10321	
3811	11862	A	4742	157	273	

3812	11863	A	4743	469	676	
3813	11864	A	4744	237	497	
3814	11865	A	475	816	1099	HFGEFFFFLRQSL/NSVAQAGVKWRDPS SLQPLPPGFKRFSCPSLPSSWDYRRVPPH LANFCIF/MSRRGFIMLARLAQPQ/CDPPI SASQSARITGV
3815	11866	A	4750	303	1978	
3816	11867	A	4751	142	408	
3817	11868	A	4753	49	163	
3818	11869	A	4754	665	733	AQEP/LTWCLLPTLVPGKCEWRQV
3819	11870	A	4755	334	520	
3820	11871	A	4756	3	222	
3821	11872	A	4757	133	205	DLPQAQSNLQWPRKTS*LKPHERL
3822	11873	A	4758	250	532	
3823	11874	A	4759	524	677	
3824	11875	A	476	3	232	
3825	11876	A	4760	110	1520	
3826	11877	A	4761	1	635	
3827	11878	A	4762	2	4398	
3828	11879	A	4763	2016	2227	
3829	11880	A	4764	1388	1520	
3830	11881	A	477	2	732	FVPGAEMAASGRCLCKAVAASPPPAWR RDNTEARGGLKPEYDAGVIGAGHNLV AAAYLQRLGVNTAVFERRHVIGGA AVT EEHPPGFKFSRASYLLSLLRPQIYTDLELK KHGLRLHLRNHYSFTPMRKR VQA AKVP RCLLLGTDMAENQKQIAQFSQKDAQVF PKYEEFMHRLAL AIDPL LDAAPV DMAAF QHGSLLQKRRALSTLKP LLKAGRILGAQ LPRYYEVL TASITKVL DQWFES
3831	11882	A	4770	620	903	
3832	11883	C	4771	230	487	MLNLASPLDKLTLQNTTQNGDSSTHISS NSIHKHTSSSSSVLFPDGTLEALFVSSPKV EASPLEAXVPCSASHSCNTSSKLNRRRL*
3833	11884	A	4772	1	350	
3834	11885	A	4775	97	185	
3835	11886	A	4776	845	942	
3836	11887	A	4777	510	636	
3837	11888	A	4778	22	333	
3838	11889	A	4779	310	422	
3839	11890	A	478	161	610	GRRPSPQETPRPTSLSGAPPTPRHSRCPPN HTVSSASLSLPSRHLFLTYRHCRNFSILL EPSGCSKDTFLLLA K SQPGHVERRAAIR STWGRVGGWAMGRHLKTD/GSSYGWH DA/RTPTQLMAYESREFDDILQWDFTED FFNLTLKEL
3840	11891	A	4780	1	140	KIRCEGLSRLDKGE/RR/RGKGHDG/LYQ GLSTATKDTYDAFHMQUALPPR
3841	11892	A	4781	17	283	
3842	11893	A	4782	2	673	
3843	11894	A	4784	131	523	
3844	11895	A	4785	197	582	
3845	11896	A	4786	235	416	
3846	11897	A	4787	280	569	
3847	11898	A	4788	208	486	VQRHCLAGLIHHPFQKWNPKDQILDPTW RQGRSTSPRAPGRRGPGARGPAPSPAP RGARRRWRAGFRQRTPTHTGPPAPTAKT LLAGREPPR
3848	11899	A	4789	190	594	
3849	11900	A	479	15	405	GGTGAMAPW/AGGEHSRMNPLRAVWL TLTAAFLLTLLQLLPPGLPGCAIFQDLI RYGKTKCGEPSRPVACRAFDVPKRYFSH LYTISFLWNDISAFW/LFLFFLFTPLFSY LRFLFHS HLASCFHFLV

3850	11901	A	4790	523	722	
3851	11902	A	4791	171	320	QDLFSSSRQLEAFSNTCKRTQRTCRNRM MYR*RYSCGGTE*GSYPNTLE
3852	11903	A	4792	243	445	
3853	11904	B	4793	320	434	XQCPLNRMAGHISSPYRSEAVVSSPGAP VRTGPSWEPEGK*
3854	11905	A	4794	146	609	
3855	11906	A	4795	874	1126	
3856	11907	A	4796	1	957	
3857	11908	C	4797	209	406	MTRCGSLGPSPLQGVYMATVRRGDSVW WGTECGRDSPAVRVSLFLLCSCWGWS RGLTPWRPCGP*
3858	11909	C	4798	133	237	MFMDXXXXXXGGRFKGSLGGPKFTRAC KVKFFSL*
3859	11910	A	4799	250	422	ASAMVTSTSTPGSILMEVICLTISEGLCKS MSRL*ILIWKRSHVLEPSPQGVFLVVI
3860	11911	A	48	1662	1858	PSFLETEPCSIQARVGWHDLSLQPLPP \GSSNSPASASQVAGITGA*HHARLIFLFF VEMGCAE
3861	11912	C	480	80	370	MWAPREQLLGWAAEALPAKDSA WPWE EKPRYLGPVTFEDGAVLFTEAEWKRLSL EQRNLYQEAMLENLRNLGSLXXXXXXXXX XXXXLALDLNLGFWL*
3862	11913	C	4800	33	158	MRMQQPSVKPGFKDLQCKTmplLLM KYIVLENIGLKIFLR*
3863	11914	A	4801	3	344	AQDRLHWGQTQNRQGGHALVPAEV* WDHPSWQINSRFYPKEQ*KVFSTSSSSS GGAVLKNPWGGQSLRGLARKNLFPYRG PNKNLPGNFGKETLLWGGDKLGQPPSR NLRL
3864	11915	A	4802	7	1268	
3865	11916	A	4803	65	376	
3866	11917	A	4805	64	1355	
3867	11918	A	4806	2	451	AQKESRSVQRSWKLKPLIVLSPLQTGL TVQSTWSTCPVSRLVTLSQLGVHSRSL SSRCRDEGFSDTDPEATEPQGNPNPSC* GAGTAWGRMEPPAPQHFGDFPTPL*MS WC*DCVNPKTTHGPVLWPPFEAKTKQP DTLCSGAGLY
3868	11919	A	4807	239	580	ASTREVSLSGRTWPMIMVVPPTSAAWG MSLLSCTPLCFLPCRLSDR*PCSKASFSSD PRSSRRQVEVHLVKALPSPSEDAPPPPA RNSPAEASPVMPQNFLISAKPNPLASL
3869	11920	A	4808	1	180	FPGLGPHPCSNGCHLP*APSPPLPG*PPL SSQPLSEERGSEGRSEGVDAAHTARLAP NG
3870	11921	A	4809	1018	1284	
3871	11922	A	481	1	1083	
3872	11923	A	4810	704	978	
3873	11924	A	4812	63	131	
3874	11925	A	4813	204	448	
3875	11926	A	4814	397	553	
3876	11927	A	4815	361	764	RSKYAASKPALAIWDHHPGNLVRISAVH *RHTWFKLLFNVIIFTVFSSHFFNLFFLLF CLFFIHFFFDQPGHCHLCVTPATCVRHL GIMRKSC
3877	11928	A	4816	137	262	
3878	11929	A	4817	265	394	
3879	11930	A	4818	1817	2233	RITFQERLQARSRREVGSARPKTARQVC RLPAAAASPLARSRSACFRCLQKVTEE RECGRITGSP*TSSFTKTLRTITPFTSHKR RVGIIQSNQPPEPDSNDRTLRPEPEGCW SESWAPPHFASSNRGLPGSESME
3880	11931	A	4819	569	950	

3881	11932	A	482	3	503	TGTPVSTISWCCYLVCLLACVRAQMW APREQLLGWTAELPAKDSAWPWEEKP IYLGPUTFEDVAVLFTEAEWKRLSLEQR NLYKEVMLENLRNLVSLAESKPEVHTW PFCPLGFGSQQLSQDELHNHPIPGFHA GNQLHPGNPCPEDQPQSQHPSPDKNHRG AE
3882	11933	A	4820	1868	1912	TFVKN*DRSKHITY
3883	11934	A	4821	1003	1094	
3884	11935	A	4822	810	970	
3885	11936	A	4823	133	261	
3886	11937	A	4824	76	475	
3887	11938	A	4825	1	1647	
3888	11939	A	4826	1	1459	
3889	11940	A	4827	456	705	
3890	11941	A	4828	417	791	
3891	11942	A	4829	553	734	
3892	11943	A	483	138	2125	
3893	11944	A	4830	246	346	AFEENLLRVCKKLYSVFTQMPKMNAN VFIGAN
3894	11945	A	4831	3	241	SCERARFWAAAVAGVAATRVRRLAIT GLTMERKVLALHARKKRTKAKKDKAQ RK*/RLVPQHPILWIFLRHLLCSGFTS
3895	11946	A	4832	195	266	GVWRPLSGCNASSA*SQEPCTT
3896	11947	A	4833	1	1278	
3897	11948	A	4834	2854	3176	PVISSSVCRASPKSRIFSSQSSFTARLLGF RSL*IMSAECIYFRPRRIW*IRN*TWSSVS F*HFHNVVQICPHEMGHQBHIEFLQRPC RCKNVQQTNHIFMFHMFK
3898	11949	A	4835	1	2991	
3899	11950	A	4836	472	575	
3900	11951	A	4837	1	248	
3901	11952	A	4838	676	788	
3902	11953	A	4839	212	677	
3903	11954	A	484	1	2580	
3904	11955	A	4841	92	316	
3905	11956	A	4842	1	578	
3906	11957	A	4845	788	1173	
3907	11958	A	4846	35	406	SGTPASPCLEMDPNCSCSPVGSCACAGS CKCKECKCTSCCKSECRAFPANLGDGPS *SREPRALQAGAGQ*PASPNSFNT*FRIR PQIALKMGCCSCCPVGL/CAKCAQGCIC KGTSKCCSCCA
3908	11959	A	4847	299	981	
3909	11960	A	4848	152	797	
3910	11961	A	4849	1	124	
3911	11962	A	485	1	687	
3912	11963	A	4850	2	719	
3913	11964	A	4851	98	263	
3914	11965	A	4852	741	965	AHLPEFLLSPCPSLGGPRPRSHCRW*HCP RLRAAPPPA*SALCLGGCCECVAAPGRW YCWVPGDRACSPHTCAR
3915	11966	A	4853	105	284	

3916	11967	A	4854	407	1815	TRATRWKRTKRYTLRKTERWSRPRVIMD SASR/HAPGNGLYVNYGLKALNIHGGQK LTLAEHGGAYGATADMSAKIGGEDLAI NTVRQVSLSNGQNDYQGATYVQMGTLR TDADGALGNTRELNISNAIIVDLNGSTQ TVETFTGQMGSTVLFKEGALTVNKGGIS QGELTGGGNLNVTTGGTLAIEGLNARYN ALTSISPNAEVSLENTQGEFSSKRRQTRK EIFLSRMEQILPWQNMVEVIEPFYPKAGN GRRPYPLETMLRIHCMQHWYNLSDGAM EDALYEIASMRLFARLSLDSALPDRTTIM NFRHLLAQHQLARQLFKTINRWLAEGV MMTQGTLDVATIEAPSSTKNKEQQRDP EMHQTKKGHQWPLWHEGPHCLVTTAA NEHDLNQLGNLLHGEEQFVSADAGYQG APQREELAEVDVDWLIAERPGKVPARHR LSAHGCVLYTALSRRIVALPLPVSAPP
3917	11968	A	4855	1020	1352	
3918	11969	A	4856	491	628	KTITNWRCYSRWPTCFGRK*YDWHRQ MTPPRQRAVLWTKSPKTV
3919	11970	A	4857	1	1872	MVIVPIGYAAQELFDVSQVRGGTPYGAT TIAGGDGSRQPSQEELSIARYQGEYVAG VRYRSTFYPGIS/ALSVLSHILVLYCTAGL HIGAIAIVPTRYAYCNSEFSSKRRQIRKEI FLSRMEQILPWQNMVEVIEPFYPKAGNG RRPYPLETMLRIHCMQHWYNLSDGAME DALYEIASMRLFARLSLDSALPDRTTIMN FRHLLAQHQLARQLFKTINRWLAEGV MMTQGTLMHQTCKGNQWHFGMKAHIG VDAKSGLTHSLVTTAANEHDLNQLGNL LHGEEQFVSADAGYQGAPOREELAEVD VDWLIAERPGKRSASCIQKLNTTMIYVT HDQTEAMTMATRIVIMKDGIVQQAER NDWHFTIGAMYEIENVEGYGEDLDGLA DPSVYFNAANGPCRIALGYHHEGPENIT RAPEEMRSFLLDAGAEYNGYAADLTRT WSAKMTNDYAQLVKDVNDEQLALIAI MKAGVSYVDYHIQFHQRIAKLLRKHQII TDMSEEAMVENDLTGPFMPHGIGHPLGL QVHDVAGFMQDDSGTHLAAPAKYPYLR CTRILQPGMVLTIIEPGIYFIESLLAPWREG QFSKHFNWQKIEALKPFGGIRIEDNVVIH ENNVENMTRDLKLA
3920	11971	A	4858	1231	1407	
3921	11972	A	4859	491	553	
3922	11973	A	486	444	843	EKSVYSLIFPCVFFLPSTWEKEDAVNILQ FWLAADNFQSQLAAKKGQYDQGEAQN DAMILYDKYFSLQATHPLGFDRCCITKKI ESNICREGGPLPNCFTTPLRQAWTTMEK VTQNFKRIKLQEVLLVELNKI
3923	11974	A	4860	3	278	
3924	11975	A	4861	2455	2871	
3925	11976	A	4862	656	949	LLHRFCRWPALAPGAILRQIPKKQQRVG LHYSPPMSYVSWRYRVCHWTITVFCLSK TLATSYARPASISVKNTKWRCFPLPKVK TNH*NIRICLPPPR
3926	11977	A	4863	448	582	
3927	11978	A	4864	495	920	WRRRDRCAHHFAVSVTTIGSSRDPDAG SLPVHSWRRKERRSALYLHRSSRSHRRT YPRRDRRRAFWFVQPRCWLAAILSGH*T GGCT*NIRSHQLGTSQLTLRCVQNHRCR RCRSSDRPRLRVLSWHARKYQTPGRCSE R
3928	11979	A	4865	1	2799	
3929	11980	A	4866	3675	4064	VSSDQNRRCNRCYGRQLQPGGCFSLWC QFSASKSYLSPSDL**W*/QLSPSASRLPL ASLTISSSLSCAGSASFHSRHPGRCTCR YLRVFGVAFWAVW**HVDFLKSQQGKS

						AKKRQIAEKGRNYTQNP
3930	11981	B	4867	1	2325	MNLMEQPAKDQYLSTQGLPVLVNSLAR YPQEALPITNYFAASELAPAVARAFNKL KTLRENARSWLLKYPEHALTGLLPAALG KAGEAQDNARAALRMLTENGHQPLLQE IARRYNQPEVTDVAVNALLALDPLDNHPT KIPTLPAFYQPSLWTRPVLKANAQSLPDS ALLHLGEMLRFPQEEALYPGLLQVKDVC SADSLAGFAWDLFTAWQTAGAPSKESW AFTAEFSSKRRQTRKEIFLSRMEQILPWQ NMVEVIEPFYPKAGNGRRPYPLETMLRI HCMQHWYNLSDGAMEDALYEIASMRL FARLSLDSALPDRTTIMNFRHLEQHQL ARQLFKTINRWLAEAGVMMTQGTLVDA THIEAPSSTKNKEQQRDPEMHQTKKGNQ WHFGMKAHIGVDAKSGSLTHSLVTTAAN EHDNLQGNLLHGEKQFVSAMPATKEP QREELAEVDVLLIAERP GKVKTLKQNP RKNKTAINIEYMKASIRARVEHPFRIKR QFGFVKARYKGLLKNDNQLAMLFTLAN LFRVDQMIQLPTYELSSGIGAVRRQAE DGTAINSKRVYRIMRQNALLLERKPAV PPSKRAHTGRVAVKESNQRWCSDGFEF CCDNGERLRVTFALDCCDREALHWAVT TGGFNSETVQDVMLGAVERRFNDLPSS PVEWLTONGSCYRANETROFARMLGLE PKNTAVRSPESNGIAESFVKTIKRDYISIM PKPDGLTAAKNLAFAFEHYNEWHPHSA LGYRSPREYLRQACNGLSDNRCLEI*
3931	11982	A	4868	82	199	
3932	11983	A	4869	882	1091	VCHAAPPILRTTATSVPAVPGAASDSGY AAQFAAYIAC*LRAAFPSGGIHTAASHPS SISPRQRTAGS
3933	11984	A	487	77	199	SKSRPIASNKIEAIKSLPAKKPAGPDGFAT EFYQTFKEEL
3934	11985	A	4870	3	274	
3935	11986	A	4871	2888	3076	KTITNWRCYSRWPTCFGR TK*YHWHQL LSMVRQLMVLWKKISSWFMGPPIIRKSI LAENSI
3936	11987	A	4872	1	2043	
3937	11988	A	4873	222	513	PEGAPRTPGPLPRAPGRTSEGAGRGGP LGPVVTMCLPRRQLSYPDVG*AEGGLPA LDPWPGHARGSEGPRRQGGAVLAVRLG GRVYVHLHTPGGQ
3938	11989	A	4874	20	161	

3939	11990	A	4875	1	2251	MAGVGAGPLRAMGRQALLLALSHRRQ GLYFHIGETEKRCFIEEIPDETMVIGNYRT QMWDKQKEVFLPSTPGLGMHVEVKDP DGKVLSRQYGSSEGRFTFTSHTPGDHQI CLHSNSTRMALFAGGKLYREERFRLTSE STNQRVLWWSIAQTIVILITGIWQMRHL KSFFEAKKLVRRAALLSSAMEDSEALGF EHMGLDPRLLQAVTDLGWSRPTLIQEKA IPLALEGKDLLARARTGSGKTAAYAIPM LQLLHRKATGPVVEQAVRGLVLVPTKE LARQAQSMIQLATYCARDVRVANVSA AEDSVSQRAVLMEKPDVVVGTPSRILSH LQQDSLKLKRDSELLLVDADLLFSFGF EEELKSLCHLPRIYQAFILMSATFNEDV QALKELILHNPVTLKLQESQLPGPDQLQ QFQVVCETEEDKFLLLYALLKLSLRGKS LLFVNTLERSYRLRLFLEQFSIPTCVLNG ELPLRSRCHIISQFNQGFYDCVIATDAEV LGAPVKGKRGAEGPKGDKASDPEAGV ARGIDFHHVSAVLNFDLPPTPEAYIHRAG R**CDGPGICMTARANNPGIVLTFVLPTE QFHLGKIEELLSGENRGPILLPYQFRMEEI EGFRYRCRDAMRSVTKQAIAREARLKEIK EELLHSEKLKTYFEDNPRDLQLLRHDLP LHPAVVKPHLGHPDYLESKVPEPTAQL QAQRKEIQTHSQALLRLLGLSGAEHIVE HRLTPFVDRRGSGAYCTA
3940	11991	A	4876	2	2318	
3941	11992	A	4877	866	1150	
3942	11993	A	4878	417	872	
3943	11994	A	4879	3	282	
3944	11995	A	488	29	380	SETPQAPTLPQTQGSLLGEERMEDIRLT VALFTLICCPGSDEKVFVHVRPKKLAV EPKGSLEVNCSTTCNQPEVGGIÆTSLAD KVFAQTEQAQWKHLLGSSNLSPDVLV HCHFH
3945	11996	A	4880	2	437	
3946	11997	A	4881	336	442	
3947	11998	A	4882	523	630	
3948	11999	A	4883	1	1004	MAPWPHENSSLAPWPDLPPLANTANTS GLPGVPWEAALAGALLAVLATVGGN LLVIVAIAWTPRLQTMNVFVTS�AAAD LVMGLLVPPAATLALTGHWPŁGATGC ELWTSVDVLCVTASIELCALAVDRYLA VTNPLRYGALVTKRCARTAVVLVWVVS AAVSFAPIMSQWWRVGADAEAQRCHSN PRCCAFASNPYVLLSSSVSFYLPPLVM LFVYARVFVATRQLRLRGELGRFPPE ESPAPSRSLAP/APGYANSFNPŁYICRS PDRSAFRRLLCRCGRRLPPEPCAAARPA LFPSGVPAARSSPAQPRLCQRLDGERHL
3949	12000	A	4884	144	1423	
3950	12001	A	4885	1309	1702	
3951	12002	A	4886	1	648	
3952	12003	A	4887	1	1049	GGGGTTWPASVPPRHLACLRPAAPLRLP PSPARRAMPVAGSELPRRPLPPAAQERD AEPRPPHGELQYLGQIQHILRCGVKDD RTGTGTLVSFGMQARYSLRDEFPLŁTK RVFWKGVLEELLWFIKGSTNAKELSSKG VKIWDANGSRDŁDSLGFSTREEGDŁGP VYGFQWRHFGAEYRDMESDYSGQGVD QLQRVIDTIKTNPDĐRRIIMCAWNPRDŁP LMALPPCHALCQFYVVNSELSCQLYQRS GDMGLGVPFNIASYALLTYMIAHITGLK PGDFIHTŁGDAHIYLNHIEPLKIQLQREPR PFPKŁRILRKSRKLIDFKAEDFQIEGYN PHPTIKMEMAV
3953	12004	A	4888	437	851	

3954	12005	A	4889	1	1063	
3955	12006	A	489	27	406	
3956	12007	A	4890	496	701	
3957	12008	A	4891	875	1156	
3958	12009	A	4892	76	382	
3959	12010	A	4893	71	228	
3960	12011	A	4894	69	242	
3961	12012	A	4895	146	431	
3962	12013	A	4896	3	262	
3963	12014	B	4897	185	338	MSTTFMGRSQATGGCVQTDTPGPPTLLQ DTQQLSVVHPDIQLEVGFPGGGGX*
3964	12015	A	4898	69	303	
3965	12016	A	4899	260	881	
3966	12017	A	49	245	616	NPPN*NPPNACVKPEFENQPKLWSQRG VGGPRREGPPAQAPEGTAGRRADKL RVGWRPPPATSAQGSAAHSPPLFC*SSRSR GPSSPCLEAPTPGASPST*TITPPRAWRR ACWTWPCSCPTPCG
3967	12018	A	490	191	1074	RLPEMSSFGYRTLTVLFTLNCCPGSDE KVFEVHGEAKGSWAVEPKGSLAEVNCST TCANQP*SGVGLGDLSD*GFCWDEQVQ L/WKHLYLGFQTFSHDTVLQCHFTCSGK QEWSMNSN/VSALYQPPRQVILDTCPNLL GGFLGKSFHHLKLQGVPTVEPLGQP*PSF LVS VGNETLHYETFGKAAPAPQEATATF NSTADREDGHRNFSLAVLDLMSRGGNI FHKHSAPKMLEIYEPVSDSQMVIIIVTVVS VLLSLFVTSVLLCFIFGQHLRQQRMGTY GVRAAWRRLPQAFRP
3968	12019	A	4900	373	491	
3969	12020	A	4901	1	232	
3970	12021	A	4902	3	701	
3971	12022	A	4903	3	1622	
3972	12023	A	4904	26	168	
3973	12024	A	4905	258	484	
3974	12025	A	4906	1121	1518	
3975	12026	A	4907	19	541	
3976	12027	A	4908	288	561	
3977	12028	A	4909	1	1857	
3978	12029	A	491	3	403	SWSGSAAALMRPVRLMKVFTVTRIPA EGANLKVISTMSVGIDHLALDEIKKRGR VGYPDVL/TRYHRRTRSLPATYHLPPV AGGHRGSEEWVWTSWKPLWLCGYGL TQSTVGIIGLGRIGQAIARRLKPFG
3979	12030	A	4910	81	414	
3980	12031	A	4911	1	507	
3981	12032	A	4912	519	858	GLSEILAIGFCPHQVQRGPLGKVLQSLA AQLPGPFTRLVHRRQSLHAVPKCIHAVP CSFTLFHLPQEGLQRPEFLAPWGLHLKA TPVWPFANPRCCSILGAGGYFVQTLGM S
3982	12033	A	4913	67	467	
3983	12034	A	4914	2	307	
3984	12035	A	4915	1	2112	
3985	12036	A	4916	796	1018	
3986	12037	A	4919	512	625	
3987	12038	A	492	2	465	DAAGANLKVISTMSVGIDHLALDEINKR GIRVGYTPDVL/TRYHRRTRSLPATYHLP PVAGGHRGSEEWVWTSWKPLWLCGY GLTQSTVGIIGLGRIGEAPTGPLARPGSHS VVCIPGTTCLKAEKTHMLSGHFACSRDIS NEGYSFVKHRQIHK
3988	12039	A	4920	206	366	
3989	12040	A	4921	504	690	

3990	12041	A	4922	3	336	
3991	12042	A	4923	22	129	
3992	12043	A	4924	852	1364	
3993	12044	A	4925	1	897	
3994	12045	B	4926	449	2578	MLLECEEEAVCVIMCASVKYNIRGPALIP RMKTKHRIYYITLFSIVLLGLIATGMFQF WPHSISSNDWNVEKRSIRDVPVRLPA DSPIPERGDLSCRMHTCFDVYRCGFNPK NKIKVYIYALKKYVDDFGVSVSNTISRE YNELLMAISDSYYTDDINRACLFVPSID VLNQNTLRIKETAAQAMAQLSRWDRGTN HLLFNMLPGGPPDYNTALDVPDRALL AGGGFSTWYRQGYDVSIPVYSPLSAEV DLPEKGPGRQYFLLSSQVGLHPEYRED LEALQVKHGESVLVDKCTNLSEGVLSV RKRCCHKHGVFDYPQVLQEATFCVVLRG ARLGQAVLSDVLQAGCVPVVIADSYILP FSEVLDWKRASVVPEEKMSDVYSILOQ IPQRQIEEMQRQARWFWAYFQSIKAI LATLQIINDRIYPYAAISYEEWNDPPAVK WGSVSNPLFLPLIPPQSQGFTAIVLTYDR VESLFRVITEVSKVPSLSKLLVVWNNQN KNPPEDSLWPKIRVPLKVVRTAENKLSN RFFPYDEIETEAFLAIDDDIIMLTSELOF GYEVWREFPDRLVGYPGRHLWDHEM NKWKYSEWTEVSMVLTGAIFYHKY FNYLYTYKMPGDIKNWVDAHMNCEDIA MNFLVANVTGKAVIKVTPRKKFKCPECT AIDGLSLDQTHMVERSEKINKFASVFGT MPLKVWEHRA*
3995	12046	A	4927	533	804	
3996	12047	A	4928	965	1109	
3997	12048	A	493	217	426	TLVNMVEADVTTTRCLIRSGIRVGYTPDV L/TRYHRRTRSLPATYHLPVAGGHRGSE EVSERRPGAVAHC
3998	12049	A	4930	507	981	CWRSTATCYQWVIKSANRCTLQVGTTR RTMDNGDERHSRICPGM*EAARSLFIPT/ CQTRH*RPVPQRLRSNTAPIRT/RPRPSV HRPTGRESMPRTRPPEPEPLQTPLAATKR RSTSENASYSDALLRGLGKLSGKDREAR RGPRSRPGSRVQTAGAAL
3999	12050	A	4931	1121	1272	
4000	12051	C	4934	178	360	MGQELRHFGTVTWPMHRKMERRXFPRE QGPGXQLLPQWRGNEKTLGSAGRQGED HRLRAE*
4001	12052	A	4935	409	516	
4002	12053	A	4936	288	573	
4003	12054	B	4937	1	1152	MGSEAGCLVRAERFQLIVERDVRSSFPS WKELSMPGFIQKQARVYVQFFLADALI LPVPRCLHSATPSTPQTDPTGPEPHLG QSRLFLLCHKEALMKRNFCVPPGASPEV PKPALSFYVLGSWLGGTQRKEGTGWGL PEPQGNDDNDQKVHLIFFGSSVRWFEFL HPGQVYRLIAPGPATPMLFEKDGSSCISR RPLELAGCASCLTVQDNWTELESSQDI QDVL DANKSLPESSLTDLSDKSHNVYC CFRSSTYVQVLSFPETTISIPLPHIYLAEL LQGGQSPFQATASCHIVSVFSLQLFWVC AYCTSICRQSSARVDEPMTMFLWTLCTS PSVLRPIVLSFELERKPSKIVPLGTPSRSSS FQPFARAKGGK*
4004	12055	A	4938	409	701	KEKVKVNWLLNPLPKAQEFGYPSPLPA TLHLKLGSRPCKLQDH/CCCHMVIHTGH HGFGSPILHQEPMGSRRKYSRL
4005	12056	A	4939	301	573	

4006	12057	A	494	80	1058	RCSSPAGYPPRCRVALARAADCEVEQW DSDEPIPAKELERGVAAGHLLCLLSDH VDKRILDAAGANLKVISTMSVGIDHLAL DEIKKRGIRVGYTPDVLTRYHRRTRSLPC SYHLA\PLAGGL\QGSEEW\WTSWKP LWLCGYGLTQSTVGIIGLGRIGPGPLLGV LKPFQVQRFL\YTGRQPRSEEA\EFQAE FVSTPELAAQSDFIVVACSLTPATEGLC NKDFFQKMKETA\VFINISRGDVVNQDDL YQALASGKIAAAGLDVTSPEPLPTNHP LLTLKNCVILPHIGSATHRTRNTMSLLAA NNLLAGLRGEPMPSELKL
4007	12058	A	4941	339	494	
4008	12059	A	4942	408	546	
4009	12060	A	4943	1421	1581	
4010	12061	A	4944	1	1113	MHQEDLRAWYLDLGLPSHQNAQPTAW KCQRAPSPYTHQDMALIPSPTARWLSPE KEPKQGEVGEKSLLPDTLPLTDPRLTGS TEQAHAEGLAALMSALRVSHLQGRGGV VTLVDSQLGVIAVSSTQFNKGPSYRLLA DVQNRLLPKYDSQKEAELRSWIKGFTGL SIRPDFQKGLKDGILCTLVNKLQPGSVP KINASV*NWH*LENLSNFLKAMVSYGM /NPVDLFEANNLFESGNNMQVRVSLAL AGKAKTKGLRSGVDIRDKYSEKQNFDD TTMKASQCVIRLQITNKASQSGMTAYG TRRHLYDPKNRILPPMDNSTISLQMGTN KCASQVGMTAPGTQRHIYDTKLGDCKCE NSSMSLKMGYT
4011	12062	A	4945	272	902	
4012	12063	A	4946	281	470	TGWSWQCTPSC*TTMCVYTFMTYTWAW GCPPNHVQPHA*PVSPTVLLNVGFRAKA VFSGHGYL
4013	12064	A	4947	1192	2248	APSKLRSATLRRPGSSKDTARGPVSVG WCPSQEPLGARCATSCPWLCLPSSVFS PRALAIRLGGGSGSLAGCAARLQGSVP CWPLARLRSASATPLSELRQQPAPPPRC DPGSRLSVPVAPCPAPRAPQRRLPSPGP RFCRCPSLSVCRSLG/PVSPPPQFPLPPCLP RWLARSLALGRGETASQANPRNLCKKL AMKFKKFFDFGAIFEWSQSFPLSPRPVRF PLEPEGSPVPASLPERPSRHPASSSGRLQ DPGLILCSLCHYLFIRTDYAVVTRAGNG GECVWLQKFPVKLASLMSFGLYIGHF LGVPPANPQEA\PRTRSFFTPKSVMEPSAV PGTAERVLHPG
4014	12065	A	4948	654	730	
4015	12066	A	4949	1574	1881	
4016	12067	A	495	3485	4056	DLPSRHRVMEACHVCCVRRGCCV/CAC /ICVCHMCSVWCVRVLCVPQVLCVVH ALCVVCCLQCARYVWCMCCVCSVLC MRCV/CVCVPRVLCV/CVCCGCSRCSVW CVCCVCRV/CLCV/CACAVWCVCCMC/L CVLCV/CACACVCCVCRVCSVWCVRV/ CVCCACSVWCVLWCVC/VCMQCVCYV WCMCCVCCVLE
4017	12068	A	4950	207	315	
4018	12069	B	4951	199	420	MSLPIGIYRRAVSYYDDTLEDPA\MTTPPS DMGSVPWKPVIPERKYQHLAKVEEGEA SLPSPAMTLSSAIDSVDK*
4019	12070	A	4952	336	594	
4020	12071	A	4953	401	1301	
4021	12072	A	4954	388	681	
4022	12073	A	4955	272	452	
4023	12074	A	4956	256	381	
4024	12075	A	4957	58	301	
4025	12076	A	4958	562	1221	

4026	12077	A	4959	152	358	
4027	12078	A	496	1	858	
4028	12079	A	4960	184	361	
4029	12080	A	4961	2017	2406	
4030	12081	A	4968	1	396	
4031	12082	A	4969	67	180	
4032	12083	A	497	106	542	GATLGGMSEHVEPAAAPGPGPNGGGGGP APVARGPRHPQFSTPTPLINVRDRLFHAL FFKMAVVTY\SRLFPPAFRRLFEFFVLLK ALFVLFVLAYIHIVFSR\SPINCLEHVR\D KWPREGNPALWKVRHNSSRAPVFLQ\FC D\SGGR
4033	12084	A	4970	2	415	
4034	12085	A	4971	1090	1203	
4035	12086	A	4972	3	356	VQNRTLHFSLLYEPKRKSKPESYLICYKI FQDEPLAP*AFL*IPASLSQIQ*FTSRKGK ASQNLIYTVIKYSKMSLWPPEPCKYLPP CLKSNSSQLSWLLWCVLVWGVGWKYC QGWGGPPLHLVSLWGGYSASRWEDIGK QHTSLRGVPGKVIFIIYI
4036	12087	B	4973	148	305	MDNSASVEQLQETLLRALRALVLKNRPL DTSRFTKLLLKLPCGPFISLGHN*
4037	12088	A	4974	484	927	
4038	12089	A	4975	2053	2615	RGCPFGGRKAPFGLLFNVKDQTMFLSR TTYSLQELGAMGMDLLSAMFDFSEKL NSLALTEEELGLFTAIVLLVSADR\SGME \NSASVEQLQETLLRALRALVLKNRPLE TSRFTLLLLKLPLDLRTLNNMHSEKLLVLS GWTAPVTPPRAGLSAGCPLCTESELCTS LSFYETEKEKQTRILFILL
4039	12090	A	4976	173	520	
4040	12091	A	4977	44	213	
4041	12092	A	4978	840	980	
4042	12093	A	4979	72	464	
4043	12094	A	498	309	586	NKNLEISFFFETESRCCQPRLECNAGISV HCNLCPLGSSNSPTS/ASQVAEMTGVC HAQLIFVFLVAMVFHLH/VGQGGLELLT SGGPPASASQ
4044	12095	A	4980	1	132	
4045	12096	A	4981	99	212	
4046	12097	A	4982	84	196	
4047	12098	A	4983	2	186	
4048	12099	A	4984	87	347	SLNFHIGQ*AQPHAGFGLRGS*GPCPPCC QANAC*APEPNDMEDQAPGVRHPPLSN VKIQGSE
4049	12100	A	4985	176	1554	
4050	12101	A	4986	1	1863	
4051	12102	A	4987	1171	2784	
4052	12103	A	4988	176	464	
4053	12104	A	499	3	451	
4054	12105	A	4990	7	394	HHELQYPIRFCPIKSCCKGRNSLQNKIYD LSLQNFPPATLRQNLALSPRLECSGTISAP CNLHLPGSSDSPASASRVAGNAGMHCH KQLIFVFLVETGFHHVAQAGLRTP*PCG SGPPRGPKSAGDLQ

4055	12106	A	4991	1	2201	MTNLAMVERDSEAGTAASRFPGNHAAK GKAQAHYKVWRPAEVRCLKLGPEWVT LRYTIKHRPYKLCGKRQHVFVFTSRSDV GFMLTTLKPGFSVSVESKMNNKAGSFF WNLROFSTLVSTSRMTMLCCLGLCKPKI VHSNWNILNNFHNRMQSTDIIRYLFQDA FIFKSDVGFQTKGISTLTALRIERLLYAKR LFFDSKQSLVPVDKSDDELKKVNLNHEV SNEDVLTKETKPNRISSRKLSEECNSLSD VLDAFSKAPTFPSSNYFTAMWTIAKRLS DDQKRFEKRLMFSHPAFNQLCEHMMRE AKIMQYKYLLFSLHAIVKLGIPQNTILVQ TLLRVTQERINECDEICLSVLSTVLEAME PCKNVHVLRTGFRILVDQQVWKIEDVFT LQVVMKCIGKDAPIALKRKLEMKALREL DRFSVLNSQHMFEVLAAMNHRSLILLDE CSKVVLNDNIHGCPRLRIMINILQSCCKDLQY HNLDLFGGLADYVAATFDIWKFRKVLFI LILFENLGFRPVGLMDLFMKRIVEDPESL NMKNILSILHTYSSLNHVYKQCNKEQFV EVMASALTGYLHTISSVENLLDAVYSFCL MNYFPLAPFNQLLQKDIISELLTSDDMK NAYKLHTLDTCLKLDDTVYLRDIALSLP QLPRELPSSHTNAKVAEVLSSLLGGEGH FSKDVHLPNHYHNDFEIRMDTNRNQVL PLSLDVGTTSATDIQRLTYISFAGLSEL KS
4056	12107	A	4992	3	485	LHTLDTCLKLDDTVYLRDIALSLPQLPRE LPSSHTNAKGGQRS*AALLGGEGTPPSK DVVHLAPHNYHIDFEIQNGTPNRNPSAYP LSVDVDTTSCLOQIFKE*LCYVFPR SAYCLG SSHPRGFLAMKMRHLNAMGFHVILVNN WEDGQTRDGRCSQSPFLKT
4057	12108	A	4993	40	131	ATKAFEENEVYKTLTVVYCFKCVILKA SL*FRILLTEWFYMRWLKKYHIVCF/PLG DAKIFCFMYITVLFKTLEDSC*TLVVYCF FKCVILKASL
4058	12109	A	4994	2437	2762	GIILFWAQLFPASFFFFFFF*DGVSLLCCPG WSAVVRSQLTASSASRVQAILCLSLPSS WDYRHLPPCLANFFVFL/CRDGGFTMLA RLVLNS*AS*VHPPWPPQSAGDY
4059	12110	A	4995	1	299	FSLIKISMMLLMKMEK*NLQFIW/KPRRL QIAKARLNASSSSSSSSSSSSSSSVVW YWHKKRHIDHWNRLSENSINRHICSQLI LTKVPGANTKDHP
4060	12111	A	4996	3	358	
4061	12112	A	4997	76	386	VLPPPSSPALHSPAPPSTCPYLPGA/PPLL PPCAGRSPAAAAAPHCPAPCAPRH*GSR* LESPAPQGQPSRAARMPAWPLPPAPPTD PTAPPAPRSHWPAAPPT
4062	12113	A	4998	66	381	VLPPPSSPALHSPAPPSTCPYLPGALPPLE/ GPPSRRPRTFIGNPGGQGPGEVSPIVLRS PSQPH*PGNQGPCSSQPPGSPRSEHGC* HRCWALYGQEQEPAPS
4063	12114	C	4999	36	236	MGPTIPDXSXXFFWRKPITWMPTEGTSN VGPQPLSSSKSLHSXRGHPAPIPTGQAGP RDSGPGASP*

4064	12115	A	5	105	1711	VESNTGRKWTEAAGTGDICLAWGSSG DGRGGDPRGRVPAALGAAVVAAMAS PDPWAPGPKQPG/LMGRPGSSPALWAQ\ PA*PPY/FPGLTPPCQEVQSFPGPPG/EQG RVLRRGGQNV*GEGRVQVCGRRPPCPS LMEPFVYTPASPFPSGQPQGTGRRQDG EPRLGTGGQTGSPGPGLVSGPRGRAAKP GGTQGGGLVRQVPPGEHPTGEARI*HLG WVGCP*RMGQGNFGVASKPFLDL/PGPM LGSTNCDNLGSFGLS/GPMFPGWPTSTGR LPKGPSAN*GG/PGMERPPGVMPSS/GHQ DPEASGPLDLLVRAALQGG*ALGHKIGG AS*TSQKAESLPQPLGPPGGGCYGITQNP LASGPKQTWSMGRPGSFPALWAQNRLT FLTPRPSPPCQEVQSFPGPPG/PSQGAER RARLSPRERGGLKVCGRPPCPSMMEP SCLHTC*PLSLPASLRQAKEPPSCGLRAP S*HLRRPCLTPPFRPQGLLGTSHCPQKPA PDSGLLHSPNSPRGFSGQCNPRLHPQL NPSNRDR
4065	12116	A	50	96	547	ADPAAPVPWFGPSQPGARAQWPGLLGP AAPPALCSPP*TD SGVQDPVSNAPWVN SQQWWRQ/PAATEKPPATKAPGLLVQEK YK VSR*QKGW/PSTKKAKGYFP*NCPPL QFLLPPLLSLPPGDISGQCPHLPKLIPPS YPAPCPGFCPR
4066	12117	A	500	2	493	GLEFGTSHRLRENPPMVAVSCPTKTNVK GPPGGKVGAGAGÆYGEALERMFLSFP TITKTYFPHFDLASHGFAQVKGATAKKV A/DALTKAVANVDDMPNGAVRPEATL HAHKL RVEPVNFKLLKPLACLVDGPA HLPGRVSPLAVARLPWNKVSFAFCGQI
4067	12118	C	5000	231	521	MRAPVCQSQSVYFTQTISLKPTITVPGRC DAFQVTNNKLAQATQSEGVAGASNPDL ESHEPAHGMQREFSGVTAVSQADTMVN YPVSNGWENRGSG*
4068	12119	A	5001	46	1438	LSTPTALVWPGHRPP*PIP*WPLCPQEGG PGGLPRGWSSGT VAP*S*AGGCEGKIQS YPQGSASWSEPAPSPS/PAPFAPFLMLNC SGPLALSLSGPKWAREQL*CVPPRALAT GLPLEVWL*LRFPWP*CLPPPG/PWVQL LHSLSSCWGPPMPRTIRGIPPGSICRLCF CPAAGLPPWWLSSGQLPHPPGTPLCSVS *GGPDQPPLLCLSPWAPGLSSTALCHSRL VLPATPIPVTWVSCGLSTT/PPAPGATPT PAACFQQVPSAPDKPLLVSPPAKHPPVP PPVGLGLRAMDR/PPGPIPETPRDLPCHP TPPKSKLQARGPWPGWVD*TTSGWKL R KEALMGPTIPDPKSSSWAGPLVSLPLVL GGNPSPWNALRGKRDPRKCGNPQPPSPK LRKSPTAPGKTPAPYSPREKAGPQKTL GPRGPPP*SRDPPL*LRTPADPGVTRGA GPPAPRRNP
4069	12120	A	5002	1	874	LDDALESCDEHGYRTASSCLRKGVMV KSSSNREL V*SRYTDITI/SGSTSEFPDWA AGQRGSSHPRRWAARQRSSHLFYSEP DTDAKHQDDALTEEET*G/SRSASCAHW L*SNCCTATGSSTLLPLTSRL*LPRMAVK SSRASAALPSSRFSSWHRACSASPA AATT AAPSAWGLSSNIPSGPAGCAPRPTSFSL PGALPTTTTTRRHSSDRSRSPSRLTSAR ESGSKSPQG/TARDSRQALRSAMVTKTS WRMELDRECGRSSCTSTFCVSAASRGFL LQTSFRWE
4070	12121	A	5003	1	2487	

4071	12122	A	5004	227	2119	RCRKEMFSLCWAYYCI*KLQQIPMRLAP LPTLDPV*SP/GGASTATNSGSSVTSSGVS TATISGSSVTSNGVSIVTNSEFHTTSSGIS TATNSEFSTASSGSIATNSSESSTSSGAST ATNSSESSTPSSGASTATNSDSSTTSSGAST ATNSDSSTTSSEASTATNSSESSTTSSGAST ATNSSESSTVSSRASTATNSSESSTTSSGAST ATNSERSTTSNGAGTATNSSESSTSSGAS TATNSSESSTPSSGAGTATNSSESSTTSSGA GTATNSSESSTVSSGISTVTNSSESSTPSSGA NTATNSSESSTTSSGANTATNSDSSTTSSG ASTATNSSESSTTSSGASTATNSSESSTTSSG ASTATNSGSSSTTSSGTSTATNSSESSTVSS GASTATTSESSTTSSGASTATNSSESSTVSS GASTATNSSESSTTSSGANTATNSGSSVTS AGSGTAALTGMHTTSHSASTAVSEAKPG GSLVPWEIFLITLVSVVAAVGLFAGLFFC VVSACVPLCECRDALKMPGGLEQLLTS RIVHWGTEGRPIATAEGWVLLAMKIRL AAEAKIKCFLDGMAAGLRRSSLSRLGSQ AEALPTSQTMGGQAETLLSSQTGSRPNR GLFSLRRWAAGQRRSLTS
4072	12123	A	5005	124	670	FQRTKLLNGPGDVETGTSITVPQKKWLH VISPIFVQSLTLPFLAKWGDRQLQLLQIEL AAREVSDI*EETV*NETYLLLCRSKRLD TLKWAHSIPSYARLFYI**FCSLKLAFSQ FLLPADPYGVAVGGTVGHCLCTGLAVI GGRMIAQKISVRTVTIIGGIVFLAFAFSAL FISPD SGF
4073	12124	A	5006	3	273	AAAPGN GRASAPRLLLLFLVPLLWAPAA VRAGPDEDLSHRNKEPPAPAQQLPQPV VAVQGPEPARVEVSGPGWGERGCRAGC AEYQAPGL
4074	12125	A	5007	2	986	AAAAPGN GRASAPRLLLLFLVPLLWAPA AVRAGPDEDLSHRNKEPPAPAQQLPQ PVAVQGPEPARVEKIFTPAAPVHTNTE DPATQVTNLGFIHAFVAAISVIVSELGD RTFVIAAIMAMRYNRPGCWAGAMLCL/ AGLMTCLFS/VLFGYATTVIPRGLYILMF QPVLF AIFGIRMLREGLKMSPD EGQEEL EEVQAVELKKKDEEFQRTKLLNGPGDV ETGTSITVPQKKWLHFIPIFGQALTLTF LAEWGDRS*LTITVLAAREDPYGVAVG GTVGHCLCTGLAVIGGRMIAQKISVRTV TIIGGIVFLAFAFSALFISP
4075	12126	A	5008	2	439	
4076	12127	A	5009	3	366	RDSVVEILFEQDNKEQSVATLILDSLIQCP IDTRKQLAENLEMMFDVGKTQPPLKRA FSTEK*KFD*/TINLASYQIFNQL*ANCTK YVGC FVIEDYSGSESILCLLFALIYNSFDF VSLV
4077	12128	A	501	24	452	APSPDAMG/HSLWGKVNVEDAGGETLG RLLVVYPWTQRFFDSFGNLSSASAIMGN PKVKAHGKKVLTSLGDAIKHLDDLKGT AQLSELHCDKLHVDPENFKLLGNVLVTV LAIHFGKEFTPEVQASWQKMTGVASAL SSRYH
4078	12129	A	5010	387	446	
4079	12130	B	5011	16	348	MVLDCGYRESLVLPYIEGIPVLNCWGAL PLGGKALHKELETQLEQCTVDTSVAKE QSLPSVMGSVPEGVLEDIKARTCFVSDL KRG LKIQAAKF NIDGNNERPSPPKC*
4080	12131	A	5012	1	595	MGCRPVGQAGLELLTSARTCFVSDLKR GLKIQAAKF NIDGNNECPIDTRKQLAENL VVIGGTSMLPGFLHRLLA EIRYLVEKPKY KKALGKTKFRIHTPPAKANCVAWL/GK VFVGI*QVEYAMKA VENSSTAIGIRCKD GVVLGVRKISPF

4081	12132	A	5013	3	461	YIEDDMNPFQGNLEVEQRPRKSKTFL*QG AAEQIKHILANFKNYQFFIGENMISDGM VLLLDYVKGWVCPPYMIFFKDGLDMD KMLNKCGLFWIYHPVIHNWASALSSH TTTRDLRQNWTDCHPGALPFILDWGFYL GVGGHCFYEKPCPW
4082	12133	A	5014	3	325	RRVSSVTQAGVQWHGLGSLQPPPPGFKL FCLSLPRSQDYRCMPRPANFC/IFLVETG FHPAH*DKLVSNS*PCGPPAPASQSAGIT GVT/HRAHLPCNV/C*LDLFHHHV
4083	12134	A	5015	1593	4449	PSGLGNTCIYRRGPHLPNSHRHAARGRIS ADRRFRHLGHRELHPAPCVPRGGEHPA PCVPGHGELHPALCVPRGQLHSVPCIP GRGEPH/RCTLCPRSA/RCTLHPRDLRF NRIREIQGAFRRLRNLTLLNNNQIKRI PSGAFEDLENKYLKNEIQSIDRQAF KGLASLEQLRLDSNTLHCDCEILWLADL LKTYAESGNAQAAAICEYPRRIQGRSVA TITPEELNCERPRITSEPQDADVTSG
4084	12135	A	5016	1	3174	
4085	12136	A	5017	1	4759	SRPWWLRASERPSAPSAMAYRSRGPR RCLLALVLFCAWGT LAVVAQKPGAGCP SRCLCFRTTVRCMHLLLEAVPAVAPQTS ILDRLFRNIREIQGAFRRLRNLTLLNN NQIKRIPSGAFEDLENKYLKNEIQSI DRQAFKGLASLEQLYLFHFNQIETLDPDSF QHLPKLERLFLHNNRITHLVPGTFNHLES MKRLRLDSNTLHCDCEILWLADLLKTY AESGNAQAAAICEYPRRIQGRSVATIT
4086	12137	A	5018	2	267	ADLSAEAL*TRREWDDIFVKLTSS/LGQ PKILYPSKLSLINEASSSSSSSSSS/REFTT RLVL*EMLKGILHMEAQQGYLPS*KHTK V
4087	12138	A	5019	1	164	TRVNENQIESKAAALFYKRQDVARRLL SPAGS/SGAPASPACSSPPSSEFMDVN
4088	12139	A	502	38	557	APSPDAMGHFTEEDKATITSLWGKVV EDAGGETLGRLLVVYPWTQRFFD/SFGN LSSAFCHPWATPKVKAHGKVLTS/LGD AIKHLADDLKGTFQAQA*SETALVTKLHV GS*RTFKLPGEMLLGDPLGNPIFGKRISP LEVGRLSWAERWWTWSWPVALVLPRLP LKLNC
4089	12140	A	5020	1	712	EILIIHLKRFSYTKFSREKLDTLVEFPISG ARERMAGGRQGKEGVYQY*PSPHPQDL DFSEFVIQPQNESNPELYKYDLIAVSNHY GGMRDGHCMCQAVGGACPGGSGQGGD QDLPSE*LGM*ASGEGSSVVRK*TRSEI WTLSEEARKGRR*LSFPFRITTFACNKD SGQWHYFDDNSVSPVNENQIESKAAV LFYQRQDVARRLLSPAGSSGAPASPACS SPPSSEFMDVN
4090	12141	A	5021	3	3090	IPLLQLLRRLWRRHGRWTDREPOHEE LPGLDSQWRQIENGESGRERPLRAGESW FLVEKHWYKQWEAYVQGGDQDSSTFP CINNATLFQDEINWRLKEGLVEGEDYVL LPARAWHYLVSWYGLEHGQPIERKVE LPNIQKVEVYPVELLLVRHNDLGKSHTV QFSHTDSIGLVLRTARERFLVEPQEDTRL WAKNSEGLDRLYDTHITVLDAALETGQ LIIMETRKKDGTWPSAQLHVMNNMSE EDED
4091	12142	A	5022	1	1584	
4092	12143	A	5023	1	3519	
4093	12144	A	5024	3	673	
4094	12145	A	5025	3	2383	
4095	12146	A	5026	2	2348	
4096	12147	A	5027	1	7338	

4097	12148	A	5028	2	7106	KSKRQAQQMVQPQSPVAVSQSKPGCYD NGKHYQINQQWERTYLGNVLVCTCYGG SRGFNCESKPEAEETCFDKYTGNTRYVG DTYERPKDSMIWDCTCIGAGRGRISCTIA NRCHEGGQSYKIGDTWRRPHETGGYML ECVCLGNGKGEWTCKPIAEKCFDHAAG TSYVVGETWEKPYQGWMMVDCCLGE GSGRITCTSRNRCNDQDPRASYRIGDPW SNKVHRGNLLQCICTGNARGEWK CERH TSVQTTSS
4098	12149	A	5029	1	389	
4099	12150	A	503	318	449	ERKKKKMATVQKGM/PHKYYHGKTGS YNVIQHAVGNAVTRNRTRGS
4100	12151	A	5030	2	554	ADALGRPTRPASQSRCTRSQSVGPSFG GGHRGE/SGRAYVWQPPYGSSE/HASGL RYWSRRLRPAAGSFAAVCSRSVASKTPV GFIGLGNMGNPMAKNLMKHGYPLIYD VFPDACKEFQDAGEQVVSPPADVAEKA DRIITMLPTSINAI EAYSGANGILKKVKK GSLIDSSTIDPAVSKELA
4101	12152	A	5031	1	1123	MGNPMAKNLMKHGYPLIYDVFPDACK EFQDAGEQLCPNLDVNHPFVQRLHAAD TPWPISHLLAASVIGCCDIACLFSGRVSIS SLCVTISSQADEVRAKENKPIQHPTKIA EMLVVSSPADVAEKADRIITMLPTSINAI EAYSGANGILKKVKKGSLIDSSTIDPAV SKELAKEVEKMGAVFMDAPVSGGVGA ARSGNLTFMVGGVEDEFAAAQELLGC MGSNVVYCGAVGTGQAACICNNMLLAI SMIGTAEAMNLGIK/S*GFDPKLLAKILN MSSIGRCWSK*HFNPVPGVMDGVPSA N*LFRVDFGTTLHWLKDGLAQDSATST KSPILLGSLAHQIYRMMCAKGYSKKDFS SVFQFLREEETF
4102	12153	B	5032	13	441	MEGVEEKKKEVPVAPETLKKKRRNFAE LKIKRLRKKFAQKMLRKARRKLIYEKAK HYHKEYRQMYRTEIRMARMARKAGNF YVPAEPKLAFVIRXRGINGVSPKVRKVL QLRLRQIFNGTFVKLNKASINMLRDCR AIYCMG*
4103	12154	A	5033	1	775	RRVPAVPETLKKKRRNFAELKIKRLRK KFAQQMLARKARRKLIYEKAKHYHKEY RQMYRT*NFEWARMGKKLANFYVPA EPQIWRVFVIRIRGINGVSPKGSERFFQL RLRQIFNGNLL*KLNQGFRRNMAEDF*S PYIAMGGTPNLKVS KMN*SYKRWLWAK SNKKRUALTDNALIARSLGKIRHILAW DLIHEITYVAGKRFEANNFLWPFKLSFS TKVEMKKKTTHFVEGGDAGNRNEDQIN RLIRRMN
4104	12155	A	5034	193	384	
4105	12156	A	5035	96	1636	ARSPAMAPLRPLLILALLAWVALADQES CKGRCTEGFNVDKKCQRDELCSYYQSC CTDYTAECKPQVTRGDVFTMPEDYTV YERLGEEKNNATVHEQVGGPSLTSDLQA QSKGNPEQTPVLKPEEEAPAEV GASKP EGIDSRPETLHPGRPPAEELCSGKPF DAFTDLKNGSLFAFRGQCYELDEKAV RPGVYPKLARDVWGIEGPDAFTAIRNLF RGRPYLFKG*QYW/RAFEDGVLPWTY PRNISWTAFDGHSPGQTDVAALGLPCP LAYSGRERVYFFQRGKQYW/ESYQFFG TSPVQEECEGSSLASAVFEHFAMMQRDS WEDIFELFWGAERSGWVTRIQPFHL AGEWHGVPGQVDAAMGGRILHLQG MATRPLLWPKKKRFRHRNRKGYRSQ RAHSRGR*PETPRRPSRAMWLSFVLPS EESNLGA\NNYDDYRMDLALCLPTCEPI QECFFSFSGDKYYRVNLRTRRVDTPDP

						YPRSIAQYWLGCAPAGHL
4106	12157	C	5036	1	300	MRSFGQLTLCPRNGTVTGKWRGSHVVG LLTTLNFGDGPDRNKTRTFQATVLGSQM GLKGGAGSVWLQAAGLGLLPASLLWPS LLCHCYVLPAPGVPLV*
4107	12158	A	5037	359	1229	MPQPPTLGQEMTGPSQPWTGKGGLPGP* QLRAKAQEVDShLGRKKIKQNRSKSC
4108	12159	A	5038	2	311	VRWNSAAPLVTSRGAPASARPRGQALP GGSAPSAPHGQLPGRAQPAPVSGPPPTS GLCHFDPAAPWPAPGLGLMLPPHPQDW PAQP*HPPGLGLFFEIFSAS
4109	12160	A	5039	310	415	SQYFGTLRRVDHLRSGVRDQPGQLGKTP S*PQVIHPPQCPKVLGLQYYHFLFLRRS L/DSVAQAGVQWRDLGSLQRPPGFTPF SCLSLPSSWDYRRPPRLANFFVFSVETG FTVSARMVVIS*PRDPPASASQSAGDTG VSQAPV
4110	12161	A	504	1	467	DHSSSPAREQNWMEFEDELTEVGFR WVITNSSELKKHVLTQCKEAKNLEKRLG ELLTRITSLEKNINDLMELKNTARELHEA YTSINSWINQAEERLSEIEDQLNEIKRED KITEKMKNSTTVRVAASMOSKLLQGVA EEGPLRLTRSASFSA
4111	12162	A	5040	1	114	ARAEMLIVQYILPRLTHCAIFTILFISLLT *VMLLSS
4112	12163	A	5041	335	477	TPASLKIPVE**NTLLAKMVISIS*PRDLPA SASQSAGITGVSHRARC
4113	12164	A	5042	135	804	GIDTILTLNQ*SLKTRQ*FTLIIF/FFFFL RWSLALSPRPDCGLQWRDLGSLQAPLP FTPFSCLSLPSSWDYRCPPPRANFFCNFF FSRDGGFTVLARMVISIS*PQ/CDPPTLAS QRAGVTGLSHCTRLFFF*WMESPSVTQA GIQWHDLSLQPMPPQFR*FSWLSLPSSQ DYRCMPPCQANFCIFSRDEVSPC*PGWS GSPDLVIHLPWPPKVLGLHA
4114	12165	A	5043	63	361	
4115	12166	A	5044	151	384	
4116	12167	B	5045	385	479	MAGAFRRRFASEVRAQGLESLEHGLRC AGSLRGGQSLPTTMWSPVKVGFE*
4117	12168	A	5046	3	698	VFFFFFFSGCTRGPLFESDFHRAPHRGQG LAAP*AAGAPQPRAPGETRGPEPAPHWR SASGDKPPGQAA*PPALVPGEPSWDS PRGHRCSQATLPRVLAGPLQ*LS*LSL* DPPELRS*PPL*LRL*SL*PPL*PPLDS NRFP*PRSPPLENPRPRPRPRKKPRPP AEPPTYPTESVDDLPAWSTRISVHLQTS HSWPSWASLASSMFFKVTKPNRELWSS
4118	12169	A	5047	138	550	FCCCFTSSEHSLAYGSCSPRRTEVLCAQ QNPSETQAAPLASVMWK*PCNSRLKGP GPGLGEGWPESRMTSGVTVPGGTSPGT RAGGSVPCGGLSPEALRQ*GAGSGPRVS PGA/PGCGAPAA*GAASPCPQRCGAL

4119	12170	A	5048	2	555	FFFFFLGAHVVALYSNPTFTGLHIVVGKD WPPP*AAGAPQPRAPGETRGPEPAPHWR SASGDKPPGASGCLQLLFQGEVPPGDS*P QRSSALRPPFPRVLGPGPFQPAKAKQR YSORPPQGSQQLAPP/GPPRKQPQLRKVS G*SGGCDLRLRHRPACGRVCTLAQLEP ATRMGWSYVGQCGL
4120	12171	A	5049	1246	1379	RCLFILSFFTGRRTHTP*PPLPLRTGFPP* PRSPPSREPTGP/RPRPPREESPGPRQ*PP RVPHGIGLSDDLPAWSYSGS/GRPSTGLPI /PWPSWHP*RRQCSQR*QTQIPEISGSPCL SQPPLQRSVRTLRRPAPATA/PLVSKLSPP TKSLPSSDAMRPLSRAGP*RKQEDSAPQ DPEPPRNRGPGN
4121	12172	A	505	1	1140	
4122	12173	A	5050	207	251	
4123	12174	A	5051	335	419	TFDFPNWRSYFMSMSNWITSLPTLLSSWD YRHVPLYPKICIFSRDRVLPYWP*SHD FTLFVSMITLTLQIYKMTKLDNYLETIYY
4124	12175	A	5052	68	399	WELLIYFSGHTCSNLSPLLSFFFF*DS LAVSAPGVQ\WHDLC\SLRPLPPFRKRFW CLSLLSGWD\YRHVP\QYPAKICIFSRDRV LPILAKASRNV\SFLT\NLMLGGFS
4125	12176	A	5053	2	322	AAAAFFFF*DGACSVTRLECSGITTAHCN FRHLGSSNFPASTSRVVEITGTCHHT*LIF VFLVETGFHHVGGAGLELLT*VIHPPQS TKVLGLQVVSHCTRPLSDF
4126	12177	A	5054	16	357	TITIGQNFFFFFLEMGCSCVARLECSGIS AHCNLKLLGSSNLPSTTS*VAGTTGVCA TIPSYFYNKISM*NQSLPMLPSLGLELLG LRPVFLPRPPKVLGITRHEPPHSALK
4127	12178	A	5055	2	346	LRWSL/DSVAQGGVQWHDGSLQPPPPG FKRLSGLSLMSSWDYRRPPRLANFLHF **RRSFTMLARMVLIS*PHDPPASASQSA GITGVSDHAQSQIFLKLQMTKSMGFKTK FLN
4128	12179	A	5056	3	401	FFFWRQSLTLVTQAGVQ*LDHGSLOPPL PGPKGFSHLSPPSSWDHKKHAPPHLANFF L*RHGFTM/RLVLTSLPQ/CDPPAAASQS AGITGVSHCAQPVIFCKKLDSSDIFTPS NLQPRGFWDLTAPQGEIVST
4129	12180	A	5057	142	250	PPTGSLLTPLWDPQFASLFGTL*WERE *PLPQNV
4130	12181	A	5058	2	775	RCNSAQQQMTSSQKALMLELKSLOEEP VEGFRLTVDESDLYNWEVAIFGPPNTLY EGGYFKAHIKFPIDYPSPPTFRFLTKM WHPNIYEEWEMYGISILHPPVDDPQS LPSEWNPQTQCEGLILLRC*SHWLNEP QHLSQPMSDASVMFRKWERQ*REKTK EYGLKFIRETKFSAT*GPKAGKGWGV SPTNPGREYCIKTEVPARNDEQVQSLLYD ELGMMTDIDDER*GRRKADADCYDDDEF WGMRRP
4131	12182	A	5059	1	571	ALGKAGYID/KYVTAMGIVAFVFFRSGK YNLDFRSRNDP/ARHI/TPEQLVALYKSFI REKH*VFPD*GLVQRTLFSLVCLKN/ SFDCCDDREVWKKFTANACLQEAGNDLT VNLRHIAEAVDENS CNFLQLTVD*ACK LIQSNW*GIMVSHYSLT*NTFIAILVKHCT G*/INTGAPC*SEPLARYKELSF
4132	12183	A	506	1	2640	
4133	12184	A	5060	32	534	GRERPLSPYMETLYRVPFLVLECPNLK LKKPPWLHMP SAMTVYALVVVSYFLIT GGIHYDVIVEPPSVGSM TDEHGHQRPVAF LGLQSKMDNNINGKGLCIQAS*FTMGGF RFS*ILDPIECTKYPKTSNDSFFCSIGISSV VLEFFPWARSNSMRNGNCPLI

4134	12185	A	5061	1	328	FLKQRQFGLVAQAGL*WHNLGSLQPLPP GFK*FSCLSLSSWDYRHLPPHPNLLF LVETGFYHFGQAGLKLLTDSGDPPALAS QSAGIIGVSHRAGPGLCTFSNHI
4135	12186	A	5062	2	687	GRVGFNVWRDRNDTNLIPNGSSITVNQT NKRDIYVSKYINYIFNDSVKAVYEEFRRG FYKMCDEDIKLFHPEELKDVMLGNTD YDWENIEKNARYEPGYNSSHPTIVMFW KAFHKLTLLEKKKFLVFLTGTDRLOMK DLNNMKITFCCPESWNERDPIRALTCYP VSLLPSPKYSYNGNS*KKRFKKPINNR GIWLTSLPCPNLILLLLSSLLLLLLFLY FVLF
4136	12187	A	5063	1	525	ISHDAIAQESKRYWQNEANVPGAQVLG NQIMPGFLNMKIKFVCRPQCPEKRSKSIE PDKNRKYCSAKARHSWTKDRRAMRV MSY*ARKKWMNIRPLPTKKQMPLOFDLC NHASGKKCQYVGNCSFAHSPEEREVWT YMKENGIQDMEQFYELWLKSQKNEKSE DIASQSNKEN
4137	12188	A	5064	735	1517	SYSYFFIQLCNHIASGKKCQYVGNCSFA HSPEEREVWTYMKENGIQDMEQFYELW AQESKK*KK*RHRPVS PNKGK WENQIH MANRIMAGRLQWDFSLAGMCGGKTGN SEKQWQGHISSEKHKEKVFHTEITDQYC WQHRFPTGYFSICDRYMNGH/AAQEGNS CK/CLHMGNARTFMEWGRKGRRPLKV EASTKHKDHLIGPKDNDFGKIYSFLFK DLN*YAGFYGMIPNQSIDQKNLKCSEAH SRGAARFPACIGVYRSS
4138	12189	A	5065	237	381	LHQPTTQTLAFTSNLRGR*RSAALPDAL DSSKVSEMHRLKRRGVN
4139	12190	A	5066	1	876	
4140	12191	A	5067	1	78	
4141	12192	A	5068	155	417	
4142	12193	B	5069	40	411	MQVTGVRTDSGALNITHKLASSPHSKPF PIFQATFIFSDHIRCIAEQRLAKGRIPGKA HEDAENSCPPWTSQSSPPLKSWGLDSAP PPPLSTCLSASTTRGAGAAATPQCSAPCL HRWTRCQ*
4143	12194	A	507	1	714	
4144	12195	A	5070	1	987	
4145	12196	A	5071	111	2187	DERRVGAADMFGRSRSWVGGGHGKTS RNIHSLDHLKYLHYVLTKNITVTQNRN LLVETIRSITEILWGDQNDSSVDFDFLEK NMFVFFLNLRQKSGRYVCVQLLQTLNI LFENISHETSLYYLLSNYVNSIIVHKFDF SDEEIMAYYISFLKTLCLKLNNHTVHFFY NEHTNDFALYTEAIKFFNHPESMVRIAV RTITLNVYKVDNQAMLHYIRDKTAVPYF SNLVWFIGSHVIELDDCVQTDDEHRNRG KLSDLVAEHLDDLHYLNDILINCEFLND VLTDDLNRFLFLYVYSLENQDKVFLII HHAPLVNSLAEVILNGDLSEMYAKTEQD IQRSSVLPTLSSLWQGSLSLNLQSLGLH KCSSLCGAQAADSVTGEIPAIRSLEW LISAGSKARTFFFLKMLIGFWEKVDCEY QRRQVLSTRLQEALPSNRLTDVAHVHSS CMLGFGSTAPRGSWIGDPAAVHPLPGE LAEHLGSKGTTTGTKHQPAKPSIRCFIK PTETLERSLEMNKHKGKRRVQKRPNYK NVGEEDEEEKGPTEDAQEDAEEKAKGTE GGSGIKTSGESEEIEMVIMERSKLSLA ASTSVQEQTNTDEEKSAATCSESTQWS RPFLDMVYHALDSPDDDYHALFVLCCL YAMSHNK/GKSPEKEEGLSGTQSHPGKA GTFGKEGAERKRAOV

4146	12197	A	5072	2	2774	RNLLVETIRSITEILIWGDQNDSSVDFDFFL EKNMFVFFLNILRQKSGRYVCVQLLQTL NILFENISHETSLYYLLSNNYVNSIIVHKF DFSDEEIMAYYISFLKTLCLKNNHTVHF FYNEHTNDFALYTEAIKFFNHPESMVRIA VRTITLVYKVS LDNQAMLHYIRDKTAV PYFSNLVWFIGSHVIELDDCVQTDDEHR NRGKLSDLVAEHL DHLHYLNDILINCEFL LNDVLT D HLLNRLFLPLYVYSLEN
4147	12198	A	5073	2	1802	
4148	12199	A	5074	546	802	GQAGRARQVRSVPSSALITLPLA*QKH G/ISRWVVGDENYGEGS\SREHAAL EPR HLGGRAITKSFARIHGELESVPRPSSSH
4149	12200	A	5075	3	2380	SLSVHKMAPYSLLVTRLOKALGVRQYH VASVLCQRAKVAMTHFEPNEYIHYDLLE KNINIVRKRLNRPLTSEKIVYGHLDPA SQEIERGKSYLR LRPDRVAMQDATAQM AMLQFISSGLSKVAVPSTIHCDHLIEAQV GDEKDLRAKDINQEVYNFLATAGDKY GVGFWS PGSGIIHQILENYAYPGVLLIGT DSHTPNGGGLGGICIGVGGADAVDVMA GIPWELKCPKVIGVKLTGSLSGWTSPKD VILKVAGILTVKGGTGAIVEYHGPVDS MSCTGMATICNMGAIEGATTSVFPYNHR MKKYL SKTGREDIANLADEFKDHLVPDP GCHYDQLIEINLSELKPHINGPFTPDLAH PVAEVGKVAEKEGWPLDIRVGLIGSCTN SSYEDMGRSAAVAKQALAHGLKCKSQF TTTPGSEQIRATIERDGYRQILRDLGGIVL ANACGPCIGQWDRKDIKKGEKNTIVTSY NRNFTGRNDANPETHAFVTSPEIVTALAI AGTLKFNPETNYLTGTDGKKFRLEAPDA DELPKGEFDPGQDTYQHPPKDSSGQHVD VSPTSQRLQLLEPFDKWDGKDLEDLQILI KVKGKCTTDHISAAGPWLFKRGHLDNIS NNLLIGAINIENGKANSVGNAV TQEFGP VPDTARYYKKGIRWVVGDENYGEGS SREHAAL EPRHLGGRAITKSFARDPRD EPGRKQGLLPFGPFADPADYNKIHPVD KLTIQGLKDFTPG/RSPLKCIKHPNGTQ ETILLNHTFNETQIEWFRAGSALQK*RN LQQ
4150	12201	A	5076	3	203	
4151	12202	A	5077	52	393	EASAWPAPRGSWMVVAEDPACSVTLCP ESLSGYLPGSGQGSPAAGTSPSLPPRS LPGLEKL RSPSGRESRLSSAPRAPSISAK AQLQCQAEEDPEIVNNV*FSSVTCLSL
4152	12203	C	5078	121	396	MALPGRLPHRKL AGGTLEAPWP GIPSGA VRRHQPPPTTLXXWL GKVKPLRKRIE AKFLCAEGPEHIRQGSAAVPGGGGRSRN CEQCLI**
4153	12204	A	5079	3	755	FVVDFDRPHETRVLQVSCGRAHSLVLT REGVFSMGNNSYGQCGRKVVENEIYSES HTVHRMHD F D G Q V D Q V A C G Q D H S L F T DKGKVYSCGWGADGQTGLGHYNITSSP TKLGGDLAGVNNIQVATYGDCLAVSA DGVDIFGWGNLEYLQLA/APVTDSTQVN VPRCLHFSGVGKVRQ/CLHAVARAVQC* TGEHGVFVWGYGILGK\GPNLSGKCPSL KMIPPTLFGFDGFQPRNPGFPAFRCGIQA TLLH
4154	12205	B	508	1	546	MKQPNRKRKLNMDSKERLDQDGR LVK MSFFVFCCVVSSESEHEETQDLMCSELF WVLLHMWSLDQQHQHLEDHNSSPAR GQHWMESEDELTEVGFRRWVITNSSEL KEHALTQCKEAKNLEKRLDKLLTRIISLE KNINELMELKSTARELREAYTSINSQIDQ VEKGYQRLKINLMK*

4155	12206	A	5082	7	279	GQVCIAETGVQWYHLSSQLPLPPGFKRF LACSASRRAPPCPANF*FLVEMGFHHVG QAGLQLLTLDGPPTSASQSAGITGVSHH ALPAWL
4156	12207	A	5083	5164	5586	FTAALNSWVVIKLSSCFSLSSWDCMYMP PCPASFFFFFLR*SFALVAQAGVQWCDL GSLPPPSGFERFSCGLPSSWDYRRPP/P TPG*FFFFVFLVEMGFHYVGQAGLELLT SSDLPTSASQSAGITGVSHHALPSLYK
4157	12208	A	5084	2	5438	
4158	12209	A	5085	1	4294	WAVFDGNYYYYLPWAHTKPVVTLTSY WEDISHRLDAVNALLAMAERLQTNIEAL KSGIQGKIPANQLAELWLKLIDEVIEDTR YTLPLTEGKANVTVLDTQIRKLRSRSLSQ IHEAAVRMRSEATDVKSTLAEIEDWLDK LMQLTEEPQNSMPDIIIWMIRGEKRLAY ARIPAHQVLYSTGENASGKYCGKTQTI FLKYPQEKNNNGPKVPVELRVNIWGLSA VEKKFNSFAEGTFTVFAEMYENQALMF GKWG
4159	12210	A	5086	444	797	FHLSLSPGASKPMLEPLDWEPCCKLNDV KRAKSVPLTRHLH*VYLLMLSPPPTPQ QAPVYDVPLPVSKCSHCQFPLWF*FAFL* WPVMMSVFSCVCWLHKCLLRVCSYP LPTF
4160	12211	A	5087	489	611	SPCPLCPEWYCLGFLGFLWFLV*HLSL *SILNYFLYKV
4161	12212	A	5088	1	336	
4162	12213	A	5089	1	1581	
4163	12214	A	509	1	732	
4164	12215	A	5090	235	583	
4165	12216	A	5091	1	430	MGKDFMTKTPKAMATKAKIDKWDVIKL KSFACTAKETTIRVNRQPTWEKFFATYSS DKGLISRIHKELTQIYKKKTNNPIKKWAK DMNRHFSKEDIYAANKHMEKCPSSLAIK EMQIKTTMRYHLMPPVRMAIHKSGKNR WELNNENTWTQEGEHHTLGPVVGWVK GGGKALGDTPNVNDELMAFSTTRPTFFP RSDPTTTRPMAVPPHEEKDDHLETHRPL RPRTTLPHAPDGRWLLTLTHTSTPGKT GLRTYRCLSRTEKVQTAGARPSHPHSS AAFTTWAKGPTGRRPGHMRSESATQKE VTMSPECTALRGQKADSKAHGQQGTWA ARGMHTESGTCKASRGFSPSLSPRTRIPK VFVAERKGLRGFVLSLTLPFSCIQKHWE QTVPMSPLEVEDVSE*TGNLQNGRNFLQP THLTGK*YPESTKNSHKFTRKKQTTSPKS GQRI*TDTSQKKTFMQPTNTWKNAAHH WPSKKCKSKPQ*DTT*QCLEWQSLKSQE KTGGN
4166	12217	A	5092	65	163	LEASKFSLVPTGPSV*CSPPCVHVFSLFNS HL
4167	12218	A	5093	175	495	PQFFGNVLGHLLYSFLGPFQCDENIRYLS *CSPSSCPPCTNRQYVMFSLCPCVLMV QLPPMSENMWCLVFCSCDSLLRMMVSS FIHVYPYRFCYCNLVVYFEVRCH
4168	12219	A	5094	67	351	LHTRKSVFNCVKLFLHCISSVLINQLYDR PWCVMFPTLCPSVFIVQFPMSSENMWCL VFCPCDTLLRMMVSSFIHVPPERHKSXH HDTRG*CSNM
4169	12220	A	5095	2	431	QVFGSIVRIHQGEWFPLYGILLPRVQNC LTN*LDLCWSQHQTTPHVLTHRWEINNE NTWTQEGEHHTLGPVVGWGEGGGIALG DIPNVNDKLMGAAHQHDFLVSPKITGIV LSISQVRVPFIDHRRKARYSADLTSFLIAI PG
4170	12221	A	5096	75	173	

4171	12222	A	5097	1	2349	MLED RDGE EDEGED RL DNAVRGPGPK GPVGT VSEAQLARRLTKVKNRRMLSN KPQDFQVATAWRSASLFNL YIAHLLAIA VMFQWTYSNGQWLNRPALNDFIPTAAL GLYNPTVPILGMTLGGSTQLVAPGIAQS CPGLVLAILIGEGNEATPEDPKDPTCWER LGNHPPSVLQIRVRVIEGRQLSGNNIRPV VKVHVCGQTHRTRIKRGNNPFFDEV LW LQPGDHTPASYSRAGLNDYHNCKKNKM QGVVLTHKWELNNENTWTQDGEHHTL GPVVGLWPQCLTDPEGFGEETWASTQPF AGVTCKALYLLHFTPTAIGSHCLDHCF SDFLGKINYRKEKVGLRDLGICRRPGEGR LGKHILRNVLGDDAEALIGTATVALKD LTGDQSRSLPYKLISLLNEKGQDTGIYNC ELENVAEFEGLTDFSDTFKLYRGKSDEN EDPSVVGFEFKGKLQMWVDVFPKSLGPP GPPFNITPRKAKKYLRVVIWNTKDVILA EKSITGEEMSDIYVKGWIPGNEENKQKT DVHYRSLDGEGNFNWRFVFPFDYLP AE QLCIVAKKEHFWSIDQTEFRIPPRLIQIW VNDKFSLADDYLGFPRLTLRHTIHLQ KSPGGNC/RGLDMISGTFKAMNPLKAKT AFLFEQKFMN*WWPCYAEKD GARVMA GKVENTLEILNEKEADERPAGKGRDEPN MNPKLDLPNRPETSFLWFTNPCKTMKF IVWRGFWWVIGLLFLILLFVGRAPLT LLPNYFVQWKIVKPNVLTGKG FISRVIQ Q
4172	12223	A	5098	1	296	RRSAPSTSLRTTCVSSCCWPRRRAPSMTP GAGYPSGSSAGP/PTHSP*PPWTRPS/SAQ RYLRK*QPQPGPALLPLLPAPFKAWLS GLGPVVLDSPPGQ
4173	12224	A	5099	26	253	RWLSPWPL/SCPQPGWTARNPQPTRELPP HPQAGKPFPLVPVPFQPTSPSLLPVMGGL SRPGSFSPVSVASLRCTH
4174	12225	A	51	702	1107	LQERYSDPGLLASFHGESSQDRLDTVQQ EK*NAGSASPPGPPHPNTCQPRDGRGFT RLPCHRMWGTPGIRWK MPLQ*AAGP/PH AA*WPGSLMPPCL*PSASAWTRQ**PG SLPTLTSPG*DPGAHILLWRKQSY
4175	12226	A	510	2	1601	
4176	12227	A	5100	274	2462	RRSAPSTSLRTTCVSSCCWPRRRAPSMTP GAGYPSGSSAAHHRCDGWATTHSP*PP WTRPSWRSAYLRK*QPQPGPTQHCCPLP SQPPAKGVAVRAGPCSAGLSRATIGTGQ G/PG/TSPGHTWGQORYHEATFWG*LLD CLVFKSEKPR*LILLITMF*STSVSLTML SLD*ARGRREPAHPTGPSAATN*PGAL LPTVQIS*KCSLQAPERASPPPCSPR/PPA TASFRPSLSDPGPS/APSFGKPSHLKPNS NIFIFLPYQLLSHL*VAQSMATPCPQPGW TARNPQPTRELPPHPQAGKPLLPVPVPFQ PTSPSLLPVMGGLSRPGSLSQWLL*G AVHAR*PVFSLPRGTEL TWTPSAKGPM GWAAGLAASGGCLHSSR*PTLVFRGWW EHIPVPLPHNRCGDSPPGR*QGSSMVVR DSGEL*GLGDPGLPGFENKPCPF*AEIL KWNARLARNVLTQNAPSPCPYWTWP CLMPKDPYPEAYPPYVLR EAECPLQAV MGPEAPPAWPCSPVG/SVTVP/TSVSRSP PPKKLTHCE*PWAS/SPNLLVPQFPHLEK MGPPLASSSRAAHAPFSP/SPHPALGR LM PLPQWALWEPTGSPALTPPEASEACVMS QLSSR*GPRVLCWWGWGMP SFLYLFHR KSPAGAEMQSGGLPSP*PVLL*GPEAGP GPVAAEPPSQEVKL VPSGRLPVRGLSPSF QSNSRRGLQSPVRQTGPFKVKPCV

4177	12228	A	5101	1	545	DFPRQSS*NLNITGKCGISP/GTPLNAAHF VPGQY/VDVTTKTMCKGFQGVMMKRWG LKAQPATHGQSKSTGRPGA/VATGDIGR VWPGTKMPGKWGNIYRQEYGLKVWRI NTKPPINIVKWSGPGP*KWLR*RSKDFK LPAFKDLGKNLPIPIYIFFLEGDEGGTAQ KIGMDEKRVSSPGAPSN
4178	12229	A	5102	2	202	LFGYLPK*VDNMSTKKPCTWIFTLALCIT ARTWKQPRCPLVGKWI/QLCCI*KMKYY SDFKKSCQAMK
4179	12230	A	5103	1	422	FFFFFLRWSFTLVA*A*VQWRDLNSLQPP PPRFKRFSCLSLPSSWDYRRASPCSANFL DF/HFLVETRFHHVCQAGLELLMSGDLP ASASQSAGIIGVSHCARPLASFLIHIFNK CISGVRLCSRWPWRYSAQAQSLDLAY
4180	12231	A	5104	2	375	DGSCFVAQTGVQWHNLGSLQPLPPRFK* FSCLSLPSSWDLRQVPPPHANF*FLV*P GFHDVGQAGLELLTSGDPPTLATRSVGIT GVSHCARPGSIYKQRLDKKLRSVAART NRCPLWSLPI
4181	12232	A	5105	1	293	RRLFFSFLRQSLVLVIQAGVQWGDLSL RPLPAGFKRFSCLSLPSG*DYRHGPPRLA NFWIFTREGM/FAMLARLVSNS*PQGDPP ASASQSSGDYRA
4182	12233	A	5106	3	305	ETETCSVAQAGVQWPILSSLOPLPPRLKR FSCLSLNSWDYRCLPPHAANF*FLVET GFPHVGQSGKLKLTSGDLPTSGSQSAGIT GVSHCTWAGKSYIF
4183	12234	A	5107	1	485	ARRDAAEVFLVSDPSGRMVKFSLQRLN SHCFAREKEGDKPSATIHASRTMPLLSLH SRGGSSSE/SDDRLNVTEELTSNDKTRIL NVQSRLTDAKRINWRTVLSGGSLYIEIPG GALPEGSKDSFAVLLEFAEEQLRADHVFI CFHKNREDRAALLRTFSFL
4184	12235	A	5108	1	506	FGVSVYLHDYNMRTNPGEMSESTVPTH PADKGWPQGPDAQPRGGPTPPPLPKTLS RTCRPMKQASGLLGTGCPGLTISKPKK LKVRSKAAAGEKPSEPLPTRTPRPHPPP QGDRAACGLRMKGRRRHAPHAPYCRRYGS PTSVLAVLVEANEDMVGSQLLLSELQEN WQAVLAPLGQRAARDLDVEAAATQHCS PNWRTVLSGGSLYIEIPGGALPEGSKDS LPVLLEFAEEQLRADHVFICFHKNREDR GR*PVSPAUGCVCVGPAPPLHSQAGTVS LRGWGVRAGGSGRQGF*RLLPRAALLR TFSFLGFEIVRPGHPLVPKRPDACFMAY TFERESSGEEEE
4185	12236	A	5109	1	996	MVKSSLQRLNSHCFAREKEGDKPSATIH ASRTMPLLSLHSGGSSSESESVWMARD APGEAAH/CRRHPG/PSPRGPPGSWGWR TPTARQRPKTPAASREDASFRGRGCQ LRLWGS/HAGSRSSFPDCVPRGGRSAP DREDDRLNVNRGN*RSNRQDGGFFNVQ SRLATEAQ TALNWRNNC*SGGSLFNIKPA GGRRWPEGSKGQLLQFLLEFAE/EKQLR ADHVFTCSHKNREDRSLAPKLSAFLG LKILRPGHPLVPKETPDACFMALQRSRE SLPGESEEVGARLRGWAIPPPWGHFVS RVGRNRRLAHLAWVCPHVIVQINAHS Q
4186	12237	A	511	1374	2220	QAENSHINNKDVHSETPSEGHQRRKP KDHSSSPAREQNWMENEFDELTEVGFR RWVITNSSELKKHVLTOCKEAKNLEKRL GELLTRITSLEKNINDLMELKNTARELHE AYTSINSWINQAEERLSEIEDQLNEIKRE DKITEKMKNSTTVLVSTWGSQLEQNNLP HIISPLFHSTHDLNISFYGGCLLQACSSKL LQGLAEGGPLRLTRSAFFAAKLCLTKH FLPTEMIKISRKTTPDTQPRRLYLLQGV

						VDQTSRKGPTALNIRQKTFAAAPPHR
4187	12238	A	5110	1	125	FFFEMESHVIRLECSGVNSAYCNL/TLP GSSGSPASAPPQVGGTTGTHHHAQLIFV FLVETGFHHVQDGLDLL/NLVIRPPQPP KVLG*QAVLLPQHRPPK
4188	12239	A	5111	2	280	FFFFGDRVPLHSAAQAGVKWCNLGSLQ PPAP/GLKPFSCSLPSS*DYRSLPPCPTHF CIFSREVSPPSWPGWSPTPDLMNHPPRPP KVLGIQV
4189	12240	A	5112	2	291	FLEMESHVAQAGVQWRDLGSLQPPPP GFKRFSCLSPSSWDYRRPQRPANFFV FLVETGFILARLVNS*PRDPPASASQS AGITGVTYRARP
4190	12241	A	5113	3	690	FFFFFLRQSL/DSVTQAEVQW/RRILGSLR P/LQLPGLK*CCCLSLSS*DYSYNPLPRL ANFF/VFCIF**RRGFTMLARLLSNS*PCD LPTSASQSAGITGVSH/HAPGLASPSLNN KVQSSVGAQRRHDEDNGSRA*VFFCFFF FKRFALVA*AGVQWRDLSSLQPLPLRFM *FSCSLPSS*DHRCVPPHPANFFVFI*RD. GVSPCQPG*SRSPDLAIRPPRPPKVLGLQ A
4191	12242	A	5114	3	282	FFFFETESHILSPRLECNGTISAHCNRL PGPRDCPASAS*VAGITGVCHHAWLIFV LVETGFHHVQAGLELL/NLVIRLPQPPK VLGLQA
4192	12243	A	5115	3	198	LSLNWCILYIYICIYVV/CVVLFCCHSCLS NMGT*FFLAGLLLFRICLCLFIFYLL***L LFIMI
4193	12244	A	5116	1	854	MNKLFSILLGEKVDTPQPNVLHNDPHARH SDDNGQNHLEGQMNFNADSSQFKDENT DIAEKLEEKVRILCWVMTGPQNLEKKA KHVKATWAQRCNKVLFMSSEENKDFPA VGLKTEGRDQLYWKTIKAFQYVHEHY L*DADWFLKADDDTYVILDNLRWLLSK YDPEEPIYFGRRFKPYVKQGYMSGGAG YVLTREPLKRFVDALKTVKCTHS'SSIED LALGRCMEIMNVEAGDSRDTIGKGNFFH PFV/PEVHFNLKGYLPRTFWYWNYY P/VEGPGLLL
4194	12245	A	5117	13	290	ECRRQRGVQ*CNHS*QQL*PPGLMQSSL LSSPGSSDYRQVLLHSAEF*VFNLVEMG SYYVVQAGLKFLASSDPPALTSQWARIT GMSHITRA
4195	12246	A	5118	1	595	MGIHHVGQASLELLTSGDLPASASQGRG VRLYYNEGRSSQSASVTALFSSLPTVTS AMAGTRPPSARSHQTLQACRAQKTKTR MSSI*GTGAKHQASSPGKAPLSTPSYFW KPSLQTPSCSGSRSLWASLPSPLAALFLC FWQDAT*RSSTTRSSLPSWPSRSTRALRL STS*PECAPSA*ASSKAGERSTGDRL
4196	12247	A	5119	3	496	FFFLRCSVNSTAKAGVQCHNLSSLHPLP PGFKQFPCFSLPSS*DYGCAPHPANFYIP SRISQAWWRVPVIPATQEAIQSFNFVAQ VGVQWHNLSSPQAFPAFK*FSCSLPTS WDYRHMPPCPDNFCFSRGGVSPYWPS WSRTLDIMIHIPPPNVLGLQA

4197	12248	B	512	1	765	MLAGQQREFPVGVGSADPALGAAGWP QRPQARDLQLAMPEPPIPSMGSCAAGA SPTSTAPCSKAPSPIDHPRAAECRRRARD WQAAPPAAPVRDPLGEASRAPESVKDV CIYDIMFDGGAGRFAAATLGTISELPAFP EERKSWKPKRQAPGALV*
4198	12249	A	5120	3	329	ETVSHSVAQAGVHWHVGSQQPPSPGS KQFSNLSLPGGWDIRHPPHPANFIFLV ETGSHYVAKADLQLLASNDPPTSASQHA GIIGRSHCTRPRYI*WSNKL*YKIT
4199	12250	A	5121	1	537	ERQSCSVARAGVQWHDLGSPQP/LPPRL KRFS\CLNLLSSWDYRRALPHPG*FLYF* *RQGFTMLVRL/VLNS*PCDPPTSASQSA GITGVSHRARPVLRF*QNYYYFETGSGS AAQAGMQWPIMAMQPQPRLKQASNL SLLSSWDH\GMQPHANTTVCKTERKQV FRMHLLNNTNYREQ
4200	12251	A	5122	1	197	EAGSHSVAHAGEQWCDYGSLOHQPV LKQFSLSLPSS*DYRCVPPCANFLILM ISVSIRGSV
4201	12252	A	5123	809	1472	KTLLSCYLSKLWPDYLRSSRLRRAA SSFGSWRFALQRTPHTRRLSRSSKAVQ TAFPRRSPSSRHRCGSSSRATTCRMSFL SSLTTCAQQLAGWVTLKRSIGLRKRSMS LMALKKWPCLMWKKRRSLPRYPQPQRT RGKKRSGSKIMIRRLNGQMGPRTPAPA MKEVQI/TKLKKSKRRSCSHCSSKVCDS KS/VQEQGAP*VGGQQPPRG*SYAWC
4202	12253	A	5124	1	504	DSEPCSVAQAGEQ*RDLSLQPLSLGLK QFSLCLPSSRDYRRPPCLANFCYF*YR WGFTTSARPV*NSWPCDPPTSASQSAGT TGVSHQARLLLFFKAFKVWSGDSI*CVN EFNIISKISSFPHFTSTPQSCPIHMSQIKY K*F*DYP*CSKQAGGISISDTYY
4203	12254	A	5125	2	351	KQGHIMTYVLRPPFFFSRWSL/DSVSQAG VQWRVFGSLQAPPPGFLPFSGTG/RQPPS PANFFLYFLVETGFLF**RQGFTVLD RMV SIS*PRDPPALASQSAGITGVSPRTRQEGH S
4204	12255	A	5126	1	1047	MVSISWPRDLPASASQSAGITGLIGALVL SVGIYAEVER/HEI*NP*KCLPGSSHHHP PGRRHVHGLLHWAGVPP*QPPELLASL RLSRGYGLVLSWLEPRYEKMISGMYL EIVRNILIDFTKKGFLFRGQISETLKTRGIF ETKFLSQIESDRLALLQVRAILQQLGLNS TCDDSLVKTVCGVVSRRAAQLCGAGM AAVVDKIRENRGLDRLNVTGVGDGTL KLHPHFSRIMHQTVELSPKCNVSFLLSE DGSKGGAALITAVGVRLRTEASS
4205	12256	A	5127	116	498	YNFALKSELKFKNQAIVSLNKKFFFFFLR WSLRPVAQAGVQWRDLGSLQPPPPGLT PSSCLSLPSSWNRRRPPCPAKSFWIF/M* RRGFTVLARMVISIS*PRDLPASASQSAGI TGVSHRTRQEGHS
4206	12257	A	5128	3	490	GIYHTLRTGQEGRSGSIKQQRLLQRPLPYF FLFIFPSFLYMEIKH*LSFYILLFAFNIVS* PFSYFIFFF/RF*DSVLLCGPGWSTVA*S*L TAASTSDQDGSPTSGPLKVTDRVCGH T*ANFYIFCGGWGGLTILLRRIPNSWAQG IFPPWPPKVLGLQA
4207	12258	A	5129	423	495	
4208	12259	A	513	594	1300	LGASEPWQPRSQETPKHSWSPSPH/PANQS KEVPENPNYALKCTLVGHTAEVSSVKFS PN/CENGLASSADRLIIWGAYDGKYEK TLYGHNLEISDVAWSSDSSRLVSASDDK TLKLWDVRSKGCLKTLKGHSNYVFCN FNPPSNLIISGSFDETVKIWEVKTGKCLK TLAHSDPVSAVHFNCSGSLIVSGSYDGL CPIWDAASGGLCTLVDDNDNBPVSEVKE

						CRIWDAASGQCLKTLVDDDNPPVSFVKF SPNGKYILTAT
4209	12260	C	5130	628	849	MCGSVYSTIWSLIASRREETIRVIVLYIQS PNINTRHISKRGKLNKGVNQFHKEDWNLL KRVCSHSGAEAGIFS*
4210	12261	A	5131	350	412	NFELKLSPYQKKSIVWGAAQVMPVAVG KPSSEWPPGSHMDNSQIRGNPVCIGK*FS CPSLQCSWDYRCMTPLCLANLFFFKLEGG FCHVAQTSLKLLGSSSPFILASRSTGITG MNHHA\RQLLN*SIRE*HSITHRLTHSRE KSCECNLYGKTLSSNFPTKKKVSTGELP R
4211	12262	A	5132	3	189	HERKAQPAGEGRTHMTKSDSLPSFRVST LPLESHHPDPNTMGGASHRDRALSGTAT VRDTRGIDPAPVHASPTRNR\NEGRHVF KRFPDTLTDRSISIYTDHHSQIRTLRALS QL*TTPTQTPWAGPATGTGLSRGLPPYG TPEG
4212	12263	A	5133	32	800	FKTHKVRFLCIRVYSLCCKLLTYCDHFH SLDFEECAHLLKMEFPESQTKELCNMI LDCCAQORTYEFKFFGLLAGRFCMLKKE YMESFEGIFKEQYDTIHRLETNKLNRVA KMFALLYTDSLPWSVLECIKSEETTTTS SSRUFVKIFFQELCEYMGLF*/SLIARLKD GNLAPFF*RIWPRDDPRITRVAISFFPSIA SGCLTYCPVSALSSIPRLPLVALLPIPIF HHDLLLELFRLPFFYNDTLVLPFV
4213	12264	A	5134	2	706	RCNSAQQQMTSSQKALMLELKSLOEEP VEGFRITLVDESDLYNWEVAIFGPPNTLY EGGYFKAHIKFPIDYPYSPPY/TFRFLTKM WHPNIYENGDVCSILHPPVDDPQSGEL PSERWNPTQQCEGLILLRC*SHWLNEPQ HLSPQPMSDASVMFRKWRDASKGKDKKE YGLKFIRETKFSATKARRQEKGG*RF TTLGGNTCIKTEVPARNDEQVQSLLYDEL GMMTDIDDER*GRRKDAD\CYDD\DDSG E*GSPQPWAGIPASKLRCPCNDEQVQSL LYDELGMMTDIDDER
4214	12265	A	5135	7	219	EGV*VSRDW*QWS/DIGSWRHSMTGSGD SLASAF*VSGGTGESHHKQLIAVNMVEM GSHRAGQAGNELSTL
4215	12266	A	5136	2	309	DGVSLLSPLRQWHNLGLLQPPPP*FKGF SCLSLPGSWDYRHV/PPCLANFVFLVETG FRHVGQTGLELLTSGDPPASASQAGIT GVSHRTWQKMYFLSQYF
4216	12267	A	5137	1	309	SCLSLSSWDHRRVPAHPANFVFLVETG FHHVSQV/GLELLTSSNPPASASHSAGIT GVNHRAWLPLGLNLR*FMIRRLRRLK NKFHSTILRKSETSNSCE
4217	12268	A	5138	2	625	TYGEMAKIVDVPTKQLRAPDPIDSMCH FCHNVSPCTRNGCVDMEHFKVIKTHQI EDERERREKKLYFGYSLGAHPILNQITG RMQRATEGRKEELFALYSAHDVTLSPVL SALGLSEARFPRFAARLIFELWQDREKPS *TFVRILYNGVDVTFHTSFCQDHHKRSS KPMFPLENLVRFVKRDMFLALGGSCTN YYDACHREGF
4218	12269	A	5139	167	688	
4219	12270	A	514	188	478	QRGVLLKTANVLVPEDLGREMRIFFSVK TWKTFTCIFTKGTNIHLFLFYFFETASLS EAQAGAQLGSLQPPPPGGSSDPSASPI AGITGACHH

4220	12271	A	5140	3	1230	QRDSYAREFTTTVVSCCSAELQT/GEGAT ARNIFLSGFQVLEDTVLFPEGGGQPD RGTINDISVLRVTRRGEQADHFTQTPLDP GSQVLVRVDWERRFDHMQHSGQHLIT AVADHLFKLETTSWEVGRFRSAIELDTP SMTAEQVAIEQSVNEKIRDRLPVNVRE LSLDDPEVEQVSGRGLPDDHAGPIRVVN IEGVDSNMCCGTHVSNLSDLQVV*ILGT EKGKKNRTNLIFLSGNRVLKWMSRSHG TEKALTGLLKCGAEDHVEAVKKLQNST KILQKNNLKSAQ/RT*AVHIAHSLKEQSR LGRCGHITQEGG*FRVHEYHCQ*RLGQR RPSLFLTGR*ERWWTLLYWQGHRLW RPWGPWLRWSWEGKAGKGRFQGKA TKLSRRMEAQALSPGLHQHAEC
4221	12272	A	5141	3	306	SRQWTLFADGQHSGPAAPCPCGEV*RTG ALNPKTFQG/LPSAPGPCVPVPHGASHP*T PQKLQPGNKSQMKPVKPGFPPSGAGGA WASL*PSSLPPFDLQYLL
4222	12273	A	5142	1	306	FFFFFL*ROSCSVAQAGVQWYDPGSQKP PPPRFERFSCNLPS*DYRRPPLPAIFV FLVETGFHHIGQDSLKLLASSDLPIASQS AGITGMSHCTWPV
4223	12274	A	5143	81	657	TAEGGGEETKSGELGRSQRSLSQVGATR GTSEEITLIVQMRDAGGSALCSGIGGGEK WSVLGVILKKDDRIVLAYCMGHEIKRGI EDDSKVFFFFFLEMKSCSVVQAGVQWH DLSSLQPALPRYK*FSCSLPGSWDYRH VLLRLVNF*FLVEIGFHHVVQAGLKLLT SSDLPHSASRSAGITGVSHRAPRG
4224	12275	A	5144	3	494	ETEDLALSPQAGVHWAR/LSLQPPPG VFKQILCLSLSSWDYRG/PCHPHPAKFL AF*VETGVSPSWARLFLNS*PRDPPASAS QSAGEPPRWASVCNSVKMLSSAFNWCV CRLHKEKWRRQKTHTVMIHPSNRCSS RHFSRIPSSIETYNLRHTLLAGRF
4225	12276	A	5145	3	123	ESGSHSLPKL*CSGAITAHCNLKLGR DPPTSASGVAGT
4226	12277	A	5146	3	292	RQRL/NSVTHSGVQWRNPGSLQPLPPGF KHFSCLSLSSWDYRHTPOCPAIFVFLV ETGFRHARLVNS*PHNLPVSASQ/SAWI TGLSHHARPCVSF
4227	12278	A	5147	2	303	FLGWSFTLVVQAGVQWRDLGSPHPLPP GFKQFFCLSLPS*DYRHAPHLANFVFL GEMDFLHAWQAGLELLTSGDPPTLASQ SAGITGVRHCSRVSF
4228	12279	A	5148	2	613	PRVRTYRFGSVGHDTQLCLWDLTEDILF PHQPLSRARTHNTVMNATSPAGSNGNS VTTPGNSVPPPLPRSNLPHSAVSNAGSK SSVMDGAIASGVSKFATLSLHDKKEKAP RERSQSRNHSMGHNF*QEASDKLESS/SP KPKPDPAKTLGTPLCPRMEDVPLLEPLIC KKIAHERLTVLIFLEDICVTACQEGFICT WGRPG
4229	12280	A	5149	2	393	IGFQPQLTEFQVSLQDLEKLSGLVFFPHL DRTSDIRNICSVDTCLLDFQFTLYLST RKIEGARSVLRDKIMDHLKNV*NEPYD YPMRRYYKKLQELTAIDLSTHISQPSLL SYTTCILISGATPPFT
4230	12281	A	515	355	612	SFSISGSFSASIALVCQLLLAVKGSVFEVG GISYCPLNVFLDLQVAPEEDERKKRRR ERNKIAAAKCRNKKKEKTECLQKVSFAF
4231	12282	A	5150	644	962	NASSLAWTVLLKLLVGFGAGQCMGNFF FCWGGAMESPSVAQAGVQWRNLGSLQ PPPPGFKRFSCLSPSSWDYRHVPPHPAN FCIFSRDGVSRCPGWS*TPDLR

4232	12283	A	5151	3	321	RRCLCAGYFKNVARRSCWRTFCTMDGR GSPVHHPSSALHEQETKLEWIFHEVLV TTKVYARIVCPIRYEVRDLLPKLHEFN AHGFEQCGPT*SERRCKKEMDK
4233	12284	A	5152	237	602	LLITGRQYSLTFRFYIHLRNKILNSGLG KPPLKLHFYTEAFFARNPDQMEFHSVAQ AGVQWHDLG*LQPLPAGFKQFFCLRFLS SWDYKIGTPPCLAGFCIFSRDEVSPRWGR WS*TPDLK
4234	12285	C	5153	166	417	
4235	12286	A	5154	282	1112	FLKRENLLKNVCRNKLDLRPNRASPTGS QEWQRHGVQSEVQFVHSLKPGPPADS CRTAA/GDPGGTETADPGHTGLELRFPEP PKPTLPLALSEAPVP/PERGENTGPRSLPS TPMPSWGPPLSSPPRPATSPTSQAN*PP PPRPSSHPTTVPTRPQPWQPGCCAQPP RPCLH*RGGN*VY*GMQLHQKSVSWPH SQWPQKREGNGSSHEIHPSCPPSGFHGPS PEGRMPTQAGALHSWYPGLSLSHGSGP HPPPRWTATVQAARPRVPLTNL
4236	12287	A	5155	69	734	SRLGRDHVGPGLGGVG/VRR/RENDIGEY EGGRNEAGERHGRGRARLPNGDTYEGS YEFGRKHGQGIYKFKNGARYIGEYVRN KKHGQGTFTYPDGSRYEGEWANDLRHG HGYYYINNDTYTGEWFAHQRHGQGTY LYAETGSKYVGTWVNGQQEGTAEIHL NHRYQGKFLNKNPVGP/AKVCICWV*T TW*ISFNRYGKRRRGRGGRISNCCSKME SYPNH
4237	12288	A	5156	4	674	GVQRGHFQEAKGSGRCLSSLNVPHPSPP SAGMDPSSVPNPPEAGGPLAQVPSAAL AQVAPGPVPISSLLEGPTPSLPF*ERGNSS HKQASGPERGARPPALLGPQEIIGSSK/Y PPPGPGSTLGKGLLASPRCGPPQVLGWG LRDPTREEGPWGS/LGNTPREPSIKCSP* MGRMGAQPLPKAEGAPPPTQLPPTHSPR RILGPLGASPERPPPRVVPPEGEG
4238	12289	A	5157	3	342	NFFFLRQSF/NSVTQAGVQWRDLGSLQP LPSGFTPFSCSLSSWDYRHPHPHPANF LYF**RRGFTLLARMVLIS*PHDPPTSASQ SAGITGVSHGAWPKSIFFLNAEVMLEY
4239	12290	A	5158	1	251	VCVCGFCFVLETESRSVTQAGLQRHHLCL SLQPPPPGFKGFSCLSLPSSWDYRCPPPR LANF*FLVEMGFHHVQAGLKLVAASSD PPASVSQSAEMTGVSHHALPG*SRSVTQ AGLQRHHLCSLQPPPPGFKGFSCLSLPSS WDYRCPPRLANFCIFSRDGVSPRWSGW SQTRGLK
4240	12291	C	5159	24	362	MGITVFRXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXX*
4241	12292	A	516	3	853	SQARTACLSSLAARAHPSARAPAVSPR CSPAGQTNPPDPVPTLAAPSGAWSKM MLQHPGQVSASEVSASAIVPCSPPGSLV FEDFANLTPFVKEELFAIQNKHLCHRM SSALESVTVSDRPLGVSTKA EVAPEEDE RKK\RRRERNKIAAAKCRNKKKEKTEC LQLQY*QSHRPPLWHHQGFSEEEGLHFP KPSAALPSIFLSQLDEPRCVQSEKLES VNAELKAQIEELKNEKQHLYMLNLHRP TCIVRAQNGRTPEDERNLFIQIQIEGTLQ S
4242	12293	A	5160	1	287	FFFF*DIRVSAQSPRLECSGAILAHCNLC PGSSDSCASTSPVAGITGMCHHTQLIFFV FLVETGVHHVG\RGLE\RLQVIHPPQP PKVLGLQA

4243	12294	A	5161	1	1672	QTGLQATTKHSGFPVRMDNAVPIVPQAP AAQPLQIQSGVLTQGSCTPLMVATLHPQ VATITPQYAVPFTLSCAAGRPAIVEQDC RCTAGVAWKGLKQILLPSNFGQQLAWG *ALHNSVQPTAMIPEAMGSGQQLADWR NAHSHGNQYSTIMQQPSLLTNHVTLATA QPLNVGVAHVVRQQQSSSLPSKRNIQS APVSSKSSLDVLPQVYSLVGSSPLRTTS SYNSLVVPVQDQHPIIPDTPSPVSVITI RSDTDEEEDNKYKPSSSLKPRSNVISYV TVNDSPDSDSSLSPYSTDTLSALRGNNG SVLEGPGRVVADGTGTRTIIVPLKTQLG DCTVATQASGLLSNKTGPVAVSFGSSG CCITPTGYRAQRGGTSAQPLNLSQNNQ SSAAPTQSERSSNPAPRRQAFVAPLSQA PYTFQHGSPLHSTGHPHLAPAPAHLPQ AHLYTYAAPTSAALGSTSSIAHLFSPQG SSRHAAAYTTHPSTLVHQVPSVGPSSL TSASVAPAQYQ/QQVATQSYIGSFRGST IYTGYPSPKISQCYL
4244	12295	A	5162	1	111	ELRYKRWPGWKADTPQAQTVKWVGV GKSRESMIQLF
4245	12296	A	5163	2	1034	DRAHLVDFHQAVDGLQEVQRQAQEGK NIGTTKKGIGPTYSSKAARTGLRICDLLS DFDEFSSRFKNLAHQHQSMPFTLEIDIEG QLKRLKGFAERIRPMVRDGVYFMYEAL HGPPKKILVEGANAALLDIDFGTYPFVTS SNCTVGGVCTGLGIPPQNIQDVYGVVKA YTTRVGIGAFPTQINEIGLLQTRGHEW GVTTGRKRRCGWLGSMLRYAHMVNG FTALALTKLDLADVLGEVKVGVSYKLN GKVRIPYFPG*PGRCFKKGRKLKYETLPG WKADTTGRPGRWEDLPPQAQTYIRFVE NHVGSRSYHYQSFL/VSVKWVGVGQ VQESPMIQLF
4246	12297	A	5164	3	148	LLSSRDHRHVPPHPANFFCRD/RGLAMLP RLALNSWA*AIHPPWPPKVL
4247	12298	A	5165	3	325	YVFGDLAHQILNVSLGIRRLHLADVSV GICLAKLRIAPVPPHNSVFNWRCPYS SCSYVHLITSHQFQPSSELIKYNHLQHN KHNAACANAA*EKAGMYRHRRLH
4248	12299	A	5166	373	950	SRGVFFFLRQSFTLVA*AGVQWCDLGS QPLPRFKQFSCFASLVSWDYRHAPHP ANFFIFLVEDKGFSMLVRLGLELPTSGDL PASASQSPGITGVSHHARP*MILFIFMFSF GRRDGVSVTQAGVQWHDLSLQASPSG FMPFSCSLSPSSWDYRHV*PCQANFLYF* *ANLSRVSPCWGWSRTPNLK
4249	12300	A	5167	2	334	VRHRFTLVPAQGVQ*CSL*QQSPPPWF KQFSCSLPRSWDYRHLPHPANFFVF/V EKTGFHHVGQAGLELLTSVDPPASASQS AGLTGLSHHAQLSFNLSAKKSFTKTRS
4250	12301	A	5168	35	437	
4251	12302	A	5169	1	1845	
4252	12303	A	5170	1	212	
4253	12304	A	5171	371	915	
4254	12305	A	5172	1	2460	
4255	12306	A	5173	1	933	LESMIGIDPGNRGIGHLLCKDELLKASLS LSHARSVLITTFPHTFNHEPPEETDGP GAVALVAFLQALGRRSP*SLTREPVLH QKIVEDALSQVF*RRRSRY*LTQVDQW KLLRHSCAKIGDPQTLRFDHLVAIERAG RAADGNYNARKMEHQAL/RLTPFDDL FLSAKKIPGISSUGVGDGGNELGMGKVK EA/DEEAHTARGCHRLATWKAFAVIAG VSNWGGYALACALYILYSCAVHSQYLR KAVGPSRAPGRFRPGLRPSRRSLRKKKC

						WASWCSTKSGVASRASWAWRWMGCPS TTTPR
4256	12307	A	5177	1	439	
4257	12308	A	5178	1	552	GNEFSILKSPGSVFRNGNWPIPIGERIPD VAALSMGFSVKEDLSWPGLAVGNLFHR PRGYPSWVMVKGSGTKLALTPQAVVIS YPLENRVYMGKANSVFEDLSVTLRQ LRNRLFQENSVLSSLPLNSLSRNNEVDLL FLSELQVLHDISSLLSRHKHLAKDHSPDL YSLELAGLDEIGKRY
4258	12309	A	5179	3	1111	ILKSPAGSVFRNGNWPIPRERDPPDVA AULSHGLPL*KKDLSWPGLAVGNLFHRP RATVMVNVNGVNKLDLPAGSGISYPL ENAVPFSLDSVANSVHSLFSEETPVVLQ LAPSEERVYMGKGRANSVFEDLSVTLR HSRNLVFKKTLFLSFTPPQILSRNNEV DLLFLSELQVLHDISSLSRPKHLAARDH SPDLYFTGSWAGLDEIGKALLGEDSEQ FRDASKILVDALQKFADHDHVPVFMVGN PVVELVHCPSHLNTSPPLGKTRDPLRPK QAQEPQQVPYNLA\YKYNFEYSVVFNM VLWIMIALALA\VIITSYNIWNMDPAGYD SIYRMTNQKISEWIECYLWPRIKRGRFG NWLFC
4259	12310	C	518	512	739	MAEHHWAFPIPSXASXGFAXLQPTKATL KKXEGFKXFXXXXKKKKKTPEGGAXGTX IXXPXGGAGXNKXPXGXGXG*
4260	12311	A	5180	18	594	NVAGTAICSFAPGRRQTPCHTREPQDGR PRARLTAWTRARGTCRVAHTHTGRQNH PMPLWGFSRHHRAFSEHLSLGCAPPSAT WT*TRSPAAAAAGP/PVPRKPNPSPPSRS PAGLRPPGRAGPLTSRCPGPPASQASDT VGPVRHKQRGPTSDVSGAWDGPATAAS GPVVRLYPSTLGGRGRQITRSADKT
4261	12312	A	5181	68	446	RLTSELAQTLAVHPSKSARPRP*AGEKP GKKPPLQVNGAWD**PRVGADPGHSPD SLDPSTGDVQGGSYSYWEGRTITMPLW GFPDRAGLLGSPGSSGPGKRRPILAGQPY KLELQARFLGPGH
4262	12313	A	5182	2	512	APPSATWT*TRSPAAAAAGP/PVPRKPNP SPPSRSPAGLRPPGRAGPLTSRCPGPPAS PGIGHCGCRQTQAAWPRRRTYQGRGMG PRPRPRRPVVPVGGERSHSHPSGPPLRSP GPEWGLTSSSCPARG/PGGCLCPQNQLPN PGP/SGPASPNLPSRLHPTDTSGBPFPRA

4263	12314	A	5183	14	720	RNFPDRPTRPRTGRTRGRTRVRTFGPG PVASAGCSRGDGRFGEAGPTALDSGADS GVRDTLPVHEPGSCLRYRTPRPRSRH PTPLIRPTSGPRCFGSDGTHSVRCPVNAG RPGHLGLGG/AKSSGFAGQKGRLLAAG TCGVHVQGPLRAARPQEVLIQGGPLQP AAPEQPPATGAWLQPRRLRCSEKAL*LP* GAP/SQSPPRMQPITVPASG*NAGGPGA SGGTRVPG*KLPDTGGP/SAQHPLSPTGL PHDARP/PSSCPTGRSCVHCPQLNAVHL* E*PANSELSRPLESDTGP*AAPTRPGSAG PISDPHSVPPSSPSSSGTPALPGHMSS/GG KWYQHOPSACPVGL/PPDPGAEKAGSQ PSPGHLVQAPGHPGPPGHTPAVTPSFPN SRAALPSFSR*PCPQSPKQGSQCDPRPPR KPKPWKFQGS*GLPLQKNRPPFSPRTG ATPGEPPGAL/PLSGNPPKSHRDGSALPS MSMHPARPSVLGSKLSGFLPSSWPGPC TF*WMKCGRTRSIRGHSCAWLKA
4264	12315	A	5184	2	1558	RRSRDSGYRAPASHSRPGQAARAPAPR PARREVCCPRPGVPRRARTTRKTPTWAA VATGTRGASAEGGPTGLAHG/SGLAAAA GLMGCEPASGWGPGRQSGGARTAGS SGSSSGGPSAPTSSSVLGSGLVAPVSPY KPGQTVFPLPPAGMTYPGSLAGAYAGYP PQFLPHGVALDPTKPGSLVGAQLAAAA AGSLGCSKPAAGSSPLAGASPPSVMTASL CRDPYCLSYHCASHLAGAAAASASCAH DPAAAAAALKSGYPLVYPTHPLHGVHSS LTAAAAAGATPPSLAGHPLYPYGFMLPN DPLPTSATGCRPTGRATSASPRPKSC*AT /SRHTAFPGTDKLLSGYPSSSSLASAAA AAMACHMHIPTSGATGQPWDAGAAQPP PRGWDSAAATTTPRA/ALPTPGAPVPVP AATGPYYSPYALYGQRLTTASAAGVSV RGGREGERGIGRKRGRGGVQGEAASRT RLLTARGEGLGPRKERNVLPYISYPTAA TETRWDTPLPTFTSHTQTL
4265	12316	A	5185	6	56	VVAWRGSDSFGSLTSKLQVQVVFHQL LKTVPHQAHPY*LPRALQIQHRC*LPR/ DTSQVAASLLASKSSSQTSGLVSKSTSL ASVSQLASKSSSQTSGLPSKSTSQSSES SVKFSCKLTNEDVKHEATFF/LIRLYKTV AWKLVAVGGFSPNVNHGELLNAAIEAL KATLDVFFVPLKELADLPQNKSSQESIVC ELRCKSVYLTGCGKSKENAKAVASRE ALKLFLKKVVKICKRKYRGSEIEDLV LLDESRPVNLPALKHPQELL*CVQNT AYNIWYLKRKTDFCIV*N
4266	12317	B	5186	133	345	RLSERRNWTPQAMLYLKGAQGRRYLLR PEPANGPLRPAHCRIDHAPISTYYILRRPE PSYRSSSYFPDDD*

4267	12318	A	5187	2	2168	KESRRTVRRMLRGRSLSVTSLGGLPQWE VEELPVEELLFEVAWEVTNKVGGIYTV IQTKAKTTADEWGENYFLIGPYFEHNMK TQVEQCEPVNDVRRRAVDAMNKHGCQ VHFGRWLIEGSPYVVLFDIGYSAWNLDR WKGDLWEACSVGIPYHDREANDMLIFG SLTAWFLKEVTDHADGKYVVAQFHEW QAGIGLILSRARKLPIATIFTTHATLLGRY LCAANIDFYNHLDKFNIDKEAGERQIYH RYCMERASVHCAHVFTTVSEITAIEAEH MLKRKPDVVTNGLNVKKFSVHEFQN LHAMYKARIODFVRGHFYGHLDFDLEK TLFLFIAGRYEFFKTKGADIFLDSLRLNF LLRMHKSDITVVVFFIMPAKTNNFNVET LKGQAVRKQLWDVAHSVKEKFGKKLY DALLRGEIPDLNDILDRDDLTIMKRAIFS TQRQSLAPVTTHNMIDDSTDPISTIRRIG LFNNRTDRVKVILHPEFLSSTSPLLPMDY EEFVRGCHLGVPSPYEPWGYTPAECTV MGIPSVTTNLSGFGCFMQEHVADPTAYG IYIVDRRFRSPDDSCNQLTKFLYGFCNMS RRQRFIQRNRTERLSDLLDWRYLGRY YQHARVHLTLRQSFSKINFHVGT*HAPPT DRKDFKYPRAPSCSYPPFSQGGSSGPSSP QSSDVEDEVEDERYDEEEEAERDRLNIK SPFSLSHVPHGKKKLHGEYKN
4268	12319	A	5188	1	1347	
4269	12320	A	5189	1	272	QTEGFKYRRPSSVPPSPSGSQASSPQSSD VEDEVEDERYDEEEEAAGFG/RYV*ESPSI LYAVPYSDSCCQVTPSLHCSHFILFPKT DKSS
4270	12321	A	519	1	760	
4271	12322	A	5191	225	430	
4272	12323	A	5192	16	1420	PSVRRNQRF*SCKDFDYWHN*RKQEGC YT/VLEKKVLSNRKQRF/DGSSGKLTGS TSSLNKLVSQSSGNRRSQSSLLDMGNM SASDLVDADRTKFDKIFEQVLESEPLCL AEQDFISKFFKHSNIKVCLELWAGSRGP GMGGTITAT*LLGTPLPVSEKDMIRQM MIKIFRCIEPELNNLIALGDKIDSFNLYM LVKMSSHV*LOQNVDPASFLSTTLGNV LVTVKRNFDKCISNQIRQMEEVKISKKS KVGILPFVAEFEEFAGLAESIFKNAERVG DLDKAYTKLIRGVFVNVEKVANESQKT PRDVMMENFHFIFATLSRLKISCLEAE KKEAKQKYTDHLQSYVTYSLGQPLEKLN HFFEGVEARVAQGIREEEVSYQLAFNK QELRKVIKEYPGKEVKGLDNLYKKVD KHLCEEENLLQVWHSMQDEFIRQYKH FEGLIARCYPAGSGVTMEFT
4273	12324	A	5193	2	391	FFFFLRWSLA/SV/TQAGVQWRGLGSWQ RPPPGFKSFSCLSLLSSWDYRRPPHAQLI FVFLVETSFTMLAGMVSIS*PRDPPASAS QSAGITGVSHRARTLLIFKRCIRSDESFE VFLYVYLFTNILLKA
4274	12325	A	5194	2	302	KTLQSGCPRLEVQWCNLGSLQPL/PFPGS K*FSCLSLPGSWDYRSVPPRSANF*FLV ETAFHHVGQAGLELSTSGDPPVSASQSA GITGVSHSARQ*RAF
4275	12326	A	5195	2	388	RATPRHIIVRFTKVEMKEKMLRAAREKG RVTLKGKPIRLTADLSAETLQSRREWGP /IFNILKEKNFQPRISYPAKVVSFISER*IKYF TDKQMLRDFLTSRPALKELLKEALNMER NNRYQPLQNHAKM

4276	12327	A	5196	1	578	VAAKCMHKDAKKGFIRLDMS*FQERHE VAKFIGSPPGYVGHEEGQLTKKLKQCP NAVVLFDDEVDKAHPDVLTIMLQLFDEGR LTDGKGKTIDCKDAIFIMTSNVASDEIAQ HALQLRQEALEMSRNRIENLGDVQISD KITISKNFKENVIRPILKAHFRDEFGLRI NEIVYFLPFCHSELIQLVNKEC
4277	12328	A	5197	3	1618	
4278	12329	A	5198	495	653	MTLTSIDPVLTTFFNLECPL/VFTATASSG LGEVE*AIALN
4279	12330	A	5199	1	1433	MPESNCSLTWRHSVGRAVAAQGGHESS QGASLVLGEPRGGSSWLLGLEGDTGLW GGLLKEGRLTDGKGKTIDCKDAIFIMTS NVASDEIAQHALQLRQEALEMSRNRIE NLGDVQISDKITISKNFKENVIRPILKVR GLSWHFLLEPKAHFRDEFGLRUGEIVY FLPFCHSELIQLVNKELNFWAKRAKQR HNITLLWDREVADVLVDGYNVHYGA RSUKHEVERRVVNQLAAAL*SRTLLPG GCTLRITVEDSDKQLKSPELPSPQAEKR LPKLRLEIIDKDSKTRRLDIRAPLHPEKG RLTDGKGKTIDCKDAIFIMTSNVASDEIA QHALQLRQEALEMSRNRIENLGDVQIS DKITISKNFKENVIRPILKVRGLSWHFLLE PKVLTTFNLSVLYLHGNSIQLGEVNKL AVLPRLRSLTLHGPNMEEEGYRRARG HSLHQGIEKYICESDDIFRKYCNNQFL
4280	12331	A	520	669	823	
4281	12332	A	5200	1823	4712	FFKKNLCASAHYY/TWCVPLPFFFFLRQG L/NSIGQAGVQWCNHSSLQCPRLKLSL HLSLPSSWDHRHAPLRMT/NFFKYLRG LPVLPRLVSNWAQVVLPS/SASQSIGITD MSH*PAQLPNSLPFFKRQFRSISPLGM Q*CDHSSL*PQTLGLKQFSHQPPFYFFVQ MGSCYVAPSW*TPKENTTIQHHPMYT LKTTVTFLYTELYSDIA
4282	12333	A	5201	3	298	RQSCSVA*AAVQWRDLSSLQPPPLGFKR FSCLSLSSWDYRRPPRSVNF*KIFLIET GFHHLGQAGVERLTS/DPPGSASQSAGII GISHCTWPELFK
4283	12334	A	5202	1	422	APMPAATMTARSGPAAISTRCPWRPRSP STPRPSWSGTCCAPTRSLRRAATASQGPS PATNTPSPRAASPP*RVWAPRTETIKGHT AHSRLTGATTGPKLSAP/VATESGHPDSQ KPPTHPGTSD/TILPPETASHPSTRP*LPP ETASHPSTRP
4284	12335	A	5203	123	201	KRGFCWVPQVGGQGHDFGLWQSPFPG RQFSGFFLWKSWDYGHPPPC*ISSSSSSS SFSSSSSSSLKLWT*GDPLA*VSQRVGIP GLSHWP*PRLGGRGTILVYGNLHFRD
4285	12336	A	5204	88	167	KINMGILLKL VYRFNINPVKTPAGLFSS SHE/TTEIDKRILKFIWKCTEHRIAKQSLK RTKLEDFLLNFKTYEATEIKTS*YRFNI NPVKTPAGLF
4286	12337	A	5205	179	474	FGFQINVFKDPVADPNKRSKKGRSLHR TPAGNFVTL*GKGDL EYGAQDLLHTV *KNGKVTKAYSFDEIRKNAQLNIELEAA RSLGLMDWVCVCM
4287	12338	A	5206	195	351	

4288	12339	A	5207	1	1080	ERCTMPDEPLVRAPDKGTDSPSPPLEET SNGGRMLHESLRHAVPITRMQSSSEDTEA GPAYSDDEDYEDIEPRITLNEITTVTDKT SPWSSVISDTSEVISQPDEVQREGPSCPS PGPFCREELMVKSSFLSSPERAVNPHLPR QD\SPSQSLVACECEASKARVGGESASA NPQPIPCPTLSGAQQSSTFVGWSSPQTDQ NKEPKSEAPAEELKVATS*GSVDSA*LA FKKLPLNLASQSRRENHKGPPIDSSDIRQ RQVTTGSETSTKQSLLLPGPIVVPNFFLPP QQLEASLRMLSATLPPAATTDQDKSE ATRGALSQRPCRPRPNSLPLNPEEETLR IARIFSSQYSQKD
4289	12340	A	5208	1	1140	AIVEDKHSGRSYDITSDLGNVLTSTSIK TVNG*AESSDSGAESDEEDAQEDLMGA YHSDIDKKMMKIVADHKNLEVIVTNGY DKDGFVHDIQNDIHASSSLNGRSTVHVK PIDENLGQTGKSAVCIHQDINDDHVEDV TGIQHLTSDSDSEVYCDSMEQFGQEESE DSFTSNNGPFQYYLGVHSSPPMENSGRFR EDIQGPPGNGNIGNMQVVAVEGKGEVK HGGEDGRNNSGAPVHREKRAGETDEFSN VRRGRGHRMQHLSIEGTKGRQVGSAGD GERWGS DRGSRGSLNEQIALVLMRLQE DMQNVLQRLQKLEMLTALQAKSSTSTL QTAPQPTSQRPSWWPFEMSPGVLTFI WPFLAQWLVLVLYYQRRRRKLN
4290	12341	C	5209	68	331	MLKNVLMRKCGVHDREKFLVLDYFCQS SVLAVLYLILSLCYFPYQDVASECEVKC MPTFQFFKKGQKVGFEFSGANKEKLEATI NELV*
4291	12342	A	521	3	108	VCREREPHQKVFNKMPK*SYRTVPVTPE GIVLSL
4292	12343	A	5210	935	1036	
4293	12344	A	5211	1	3270	MRPKTFPATTYSGNSRQRLQEIREGLKQ PSKSSVQGLPAGPNSDTS L DAKVLGSKD ATRQQQMRATPKFGPYQKALREIRYSL LPFANESGTSAAAEVNRQMLQELVNAG CDQEMAGRALKQTGSR SIEAALEYISKM GYLDPRNEQIVRVIKQTS PGKGLMPTPV TRRPSFEGTGDSFASYHQLSGTPYEGPSF GADGPTALEEMP/PAVRGLPFPRSRPPRA RPPAPAPTQGLRCQRRGSRGTLPAAGRA LR
4294	12345	A	5212	3	274	LERLIFVGGLGQFFPPPKLRFPPKIPQLVF FSPPFRKKIFPCPPRLSLGPPRVLLKGPPS SSSSSSSSKKC*PLMFYCHRRWPTGVYV LP
4295	12346	A	5213	403	776	QGPDHFSFLFWHLLQAPGLSPCLKWATA LETPPSPNGLPIVPVFGSSRMAGMIE\SH IIEIGFLPNKEKKKGCCPLFPRNFGKF APSGLVGYLKVFEPLKNYS DHDVIKW VR*UGRASGIY
4296	12347	A	5214	165	439	PPRQAKMQNLAAPGSHSQSPW/TLRPA L*LTPSQIFSA*RLKTD TARS PRKPPSFQ PVSLASITVVGIDGQASKPLKTPQLWCQ LRQYSFK
4297	12348	A	5215	2	525	AAED*HCPIASETYKTTTVELWVTLPVEG KSVFPLINTEATHSTLPSFQGPVSLASITV VGIDSQAYKPLKSSQLWCQLGQYSFMH SFLVIPTCPVPLLGQDILT KLSASLTIPGL QPHLIATLFP SLKPPSHPLVSPHLNPHIW DMSTPSLVTDHAPLTIPLKPNHPYPVQC
4298	12349	A	5216	1	425	PGNEIYR/KGTISFFEIDGRKNKSYSQNL LLAKCFLDHKTLYYDTPFLFYVMTEYD CKGFHIVGYFSKEKESTEDYNVACILTLP PYQR/RGY/GKLLIEFSYELSKVEGKTGTP EKPLSDLGLLSYRSYWSQTINEISEITS

4299	12350	A	5217	25	193	LGGCEDSRKGAAPRCFLSRGDHSWEPRD *PPPWLFPNSNC**LAAGRSPVRSSPS
4300	12351	A	5218	1	1383	
4301	12352	A	5219	1	1617	MAEVGEIIEGCRLPVLRNQNEDNEWPL AEILSVKDISGRKLFYVHYIDFNKRLDEW VTHEERLDLKKIQFPKKEAKTPTKNGLPG SRPGSPEREVPASAAQASGKTLPIPVQITLR FNLPKEREAIPEGEPDQPLSSSSCLQPNH RSTKRKVEVVSPATVPVSETAPASVFPQN GAARRAVAAQGRKRKSNCLGTDEDSQ DSSDGIPAPRMTGSLVSDRSHDDIVTR MKNIECIELGRHRLKPWYFSPYPQELTTL PVLYLCEFLKYGRSLKCLQRHLTKCDL RHPPGNEIYRKGTISFFEIDGRKNKSYSQ NLCLLAKCFLDHKTLYYDTPFLFYVMT EYDCKGFHIVGYFSKEKESTEDYNVACI LTLPPYQRRGYRKLLIEFSEYELSKVEG KTGTPEKPLSDLGLLSYRSYWSQTILEILA MGLKSKSGERPQITSNDISEITSIKKEDVI STLQYLNLYNYKGGYILTLSEDIVDGN ERPMLKRLRLRIDSCKLHFHSQRTWSQE VDSGDQDTCPHCKCQRPASQDLGAD
4302	12353	A	522	383	542	LWSPPNNSILDTTTAGETPEQDLNRERER EKE/RERERERERERERERERERERES
4303	12354	A	5220	890	1537	MLLMFICDLLLLTSCSIALGYELSKVEGK TGTPEKPLSDLGLLSYRSYWSQTILEILM GLKSESGERPQITIK*AWRCLPGGTWHG LSVPGLSLGLLGTDKGPQGT*PVLHSE ISEITSIKKEDVISTLQYLNLYNY/KGRE GRGDRCVGCRCVQSSVG*PPAEPISAAQG QYILTLSEDIVDGERAMLKRLRLRIDSCK LHFTPKDWSKRGKW
4304	12355	A	5221	2	434	LRDGVLLCHPGWSTVAQS*LTAAALNFW VRGSSCLSL*LVLRNSPLHPANLFFYFC R/DKHLTILTRLVLNFWAQVILRPWLPKG LGITGMSHCTQPNFKNQRKGYCQVNFN NQTKTSLAGNTYFTPLFFGNKHVTSY NFPSM
4305	12356	A	5222	3	384	VVAAEVPSFFFFLRTESCFVTQAGLQW HDLGSATSI/SPGSSDSPASASQVAGITGR HHYALA*FFVFLVDMGIHHVSGWSRN SLNLVNLPCLGPPQYWGLQGMSPMPRP LKCPSLKGKMPNSHP
4306	12357	A	5223	2	322	LYFFSFETESCSVTQAGVQ/WWCDLGSL ATPPPAGSSNSCASAS*VARITGVHHHAQ LMFVFLVETGFHHFGQSGLKPLSDPPAS ASQSAGINRCEPPGTGHYIFSK

4307	12358	A	5224	1	2535	MQPLDFSSGGSDPNISLSEKIRDQLVVGO LIPDCYVELEKILSERKNVPIEFVIDRKR LLQLVRENQLQDENELPHAVHFLNESG VLLHFQDPALQLSDLYFVEPKWLCKIMA QDVSSIFGLYIRDILTVKVEGCPKHPKGII SRRDVEKFLSKKRKFPKNYMSQYFKLLE KFQIALPIGEEYLLVPSSLSDRPVIELPH CENSEIIRLYEMPYFPMGFWSRLINRLL ISPYMLSGRGICLLGQVVDHIDSLMEEW FPGLLEIDICGEGETLLKKWALYSFNDGE EHQKILLDDLMKKAEEGDLLVNPDPRL TIPISQIAPDLILADPPRNIMLNDELEFEQ APEFLDCFVCIHLYPSSDYISRHYMRTI NIVQTGFAKCRWRVTVHGADHGDGSFG SVYRAAYEGEEVAVKIFNKHTSLRLLRQ ELVVLCHLHHPSLISLLAAGIRPRMLVM ELASKGSLDRLLQQDKASLTRLQHRIA LHVADGLRYLHSAMIYRDLKPHNVLLF TLYPNAIIAKIADYGIAQ/SL*NGD*KTI QRGTPGFRAPEVARGNVIYNQQADVVSF GLLLYDILTGGRIVEGLKFPNEFDELEIQ GKLDPVKEYGCAPWPMVEKLIKQCLK ENPQERPTSAQVFDILNSAELVCLTRIL LPKNVIVECMVATHHNSRNASIWLGC HTDRGQLSFLDLNTEGYTSEEVADSRILC LALVHLPVEKESWIVSGTQSGTLLVINTE DGKKRHTLEKMTDSVTCLYCNSFSKQS KQKNFLLVGTADGKLAIFEDKTVKLG AAPLKILNIGNVSTPLMCLSESTNSTERN VMWGRMWHKDFLLF
4308	12359	A	5225	2	223	LGVAFCFFCFWFVELFGFVGLQLLSNL EKFQPLCLQIFFLSPCPIRSLY/C*SSKV SOLTITLLVFPVFFSL
4309	12360	A	5226	236	1626	LAAAHPLAGLVGGEAWIGGAKSWLSF SAGSSCMAEMATATRLGWRVASWRL RPPLAGFVSQRAHSLLPVDDAINGLSEEQ RQLRQTMAKFLQEHLPKAQEIDRSNEF KNLREFWKQLGNLGVLGITAPVQYGG GLGYLEHVLVMEEISRASGAVGLSYGAH SNLCINQLVRNGNEAQKEKYLPLKISGE YIGALAMSEPNAGFWVMVSMKLKAEKK GNHYILNGNKFWITNGPDADVLIVYAKT DLAAVPASRGITAFIVEKGMPGFSTSKK LDKLGMRGSNTCELIFEDCKIPAANILGH ENKGVYVLMGSLDLAERLVLGGLGLA MQAVLADHTIPYLHVREAFGQKIGHFQL MQGKMADMYTRLHGLFGQYVYNVAK ACDEGHIIPKDCAGVILYAAECATQVAL DGIQCFGGNGYINDFPMGRFLDAKLYE IGAGTSEVRRLVIGRAFNADFH
4310	12361	A	5227	1	867	MATATRLGWRVASWRLRPPLAGFVS QRAHSLLPVDDAIKGVLR/ESQRQLRQT MAKFLQENLAPKAAREIDRSNEFKNLRE FWKQLGEPWAVFGASQPLVQYGGFRP GAYLGSMMLG*WEEISPSFGAVGLSYG AHSNLSHQPSLLRNWEFRAQKEKYLPEG *FSGEYIGALAMSKPHAGSDVSMKLK AEKKGEATNLGAKMGRGNHYILNGNK FWITNGPDADVLIVYAKTDLAAVPASRG ITAFIVEKGMPGFSTSKKLDKLGMRGSN TCELIFEDCKIPGK
4311	12362	A	5228	3	391	SHHHPLAAPSLGEEAISRSFQSLACSPGL PAADRLSYSGRPGSRQAGLGRAGDSAV LVLPSPGPRSSRPSMDSEGGSLLEDSD EVFKMLQENREGRAAPRQSSSFRLQEA LEAEERGGTPAFLASSLSPQSFLARLQG/ GLATPPKLHTCEKCSTSIANQAVRIQGR YRHPGICYTCAIDCGLNLKRRGHFWVG DELYCEKHARQRYSAATLSSRA*APFG

						SCRKPWKLRRVARQPSWPAH
4312	12363	A	5229	2	384	FVHFQSKKTMRKICLFFFSSETGSRSVS QAGVQ/WARVIAHCNLKLLDSSDLPALA LAS*VARTVGMVYHRGLACVYFIIQINLIL YFLAQMNLLKKHQTFLFYEMLNLIASQA GKIYSSNRNIKVFWPQ
4313	12364	A	523	389	549	ERKRPSRKQ/RERNRKNQNERKSRGDW QRANVGAGQKEEMKCLAVELEIGSQPR S
4314	12365	C	5230	301	369	MPTLYNHCFLQLFTIISKLISY*
4315	12366	C	5231	210	329	MWNLCIWRVNCNTINNTNMPTLYNHCFL QLFTIISKLISY*
4316	12367	A	5232	2	268	FFFLKRDVRSFCHPGLSAVAQL*LTVAL NS*VKGSSYLSFQS/SWHYRYVLPYLAN FKNFFFKRRELTLFLRLILTSWAQVSFLL QPPK
4317	12368	A	5233	1	415	LFAGPSAMFYLA AAVSDFYVPVSEMPEH /KIQSSGGPLQITMKMVPKLLSPLVKDW APKAFIISFKLETDPAINRARKALEIYQ HQVVVANILESRQSFVIVTKDSETKLVS THSFYR*QKLL*KALIGSKIVQGS
4318	12369	A	5234	3	705	PVRFLDNFSSGRGATSAEFLAAGYGV LFLYRARSAPFYAHRFPQTWLSALRPS GPALSGLLSLEAEENALPGFAEALRSYQ EAAAAGTFLAVEFTTLADYLHLLQAAA QALNPLGPSAMFYLA AAVSDFYVPVSE MPEHKIQSSGGPLQITMKMVPKLLSPLV KDWAPKAFIISFKLETDPAINRARKAL EIQHQVVVANILESRQSFVIVTKDSET KLLSEEKKK
4319	12370	A	5235	200	636	GPCAMFYLA AAVSDFYVPVSEMPEHKIQ SSGGPLQITMKMVPKLLSPLVKDWAPK AFIISFKLET*PR/LIVINRARKALEIYQH VVAANILGVKDSPLCLL*PKDSEPKLL SEEEIEKGVEIEEKIVDNLQSRHTAFIGDR N
4320	12371	A	5236	17	424	
4321	12372	A	5237	1	338	SDRQLDC/ALDLMR/RLPPQQIGKNLSNLI DLVPSLCDLLSSVDQPLKIARDKVVAK DYLLCDYNRDGDSYRSPWSNKYDPPL DGAMPSARLRKLQVEACFHTSLSVLST FP
4322	12373	A	5238	2	160	
4323	12374	B	5239	46	426	MSDQQLDCALDLMRRLPPQQIEKNLSL IDLVPSLCDLLSSVDQPLKIARDKVVGK DYLLCDYNRDGDSYRSPMEVTKYDPSL GRMGNAVKLRAEKSLEVVGKANKWPF DQYPKTLLELLDPG*
4324	12375	A	524	1	495	EELVPIFLTLFHKIEKEGTLPSNFYEASITL IPKPGKDITKKENYRWISLMNIDAKILNK ILANQIQITKKIHHHDQVGFIQGMQGW NMHKSINVIHHVNRIKKNHMIISDAEK AFDKIQHPFIKTLK/MGIQGTYSVIK AIYDKPTANIKQTFQIQD

4325	12376	A	5240	2	938	PRVR*APGPAAGGRATDAGTGTAATAAT TMSDQHLDLCALDLKRRLRPQQIEKNLSD LIDLVPSCEDLLSSVDQPLKIARDKVVG QDYLLCDYNIDGDSYRSPWSNKDDPPLE DGAMP SARLRK\LEVEANNAFD\QYRDL YF*KVGVSSV\YLD\HGFGLS/VILH KRKGWEDGIKRRSKGCWDS\HVVEVQ EKSSGRTPHYKLTSTVMLWLQTNKSGS CTMNLGGSLTRQMEKDET\SDCSPQIS/ ATIGRLVEDMENKIRSTLNEIYFGKNKG YRSMGLRSVQTFADNSKQEAEELTLV GGFERESKQC
4326	12377	A	5241	1	1911	
4327	12378	A	5242	3	803	ESVAAALSPLG\IEVDIDVEHGGKRSRLT PVS\PEVSATGEKSSSQSSCCSDPSKPG GNVEGATQSLAEQMRKIALESEGRPEAS LCPFPPTGTTGQPSDLWPAPPHSQHLCS PTYKPEGAGCWLAVDVCCHLKSRWEPA RTL*LLGLCEWPLFPLDPCSLNCTCACVL PDCLPGARAMVRLGLLRVSPVCSW*VLF QEQMESDNCSSGDDDDWTHLSSKEVDPS TGELQSLQMPSESGPSSLDPSQEGPTGLK EAALYPHLPPEGK
4328	12379	A	5243	2	1511	RGGCDRDGPFSASSPLAMASLTVKAYLL GKEDAAREIRRFSCCSPPEAEAEAAAG PGPCERLLSRVAALFPALRPGGFQAHYR DEDGDLVAFSSDEELTMAMSYVKDDIFR IYIKEKKECRDRHRPPCAQEA\PRNMVHP NVICDGCNGPVV\GTRYKCSVCPDYDLCS VCEGKGLHRGHTKLAFSPFGHLSEGS HSRWLRKVKGHFGWPGWEMGPPGN WSPRP\PRAGEARPGPTAESASGPS\EDPSV NFLKNVGESVAAALSPLGIEVDIDVEHG GKRSRLTPVS\ESSSTEESKSSSQSSCCS DPSKPGGNVEGATQSLAEQMRKIALES EGRPEEQMESDNC/SQGGDDDDWTHLSS KE\VDPA\TGELQSLQMPSEGP\KLSGTP PREGPTGLERKLPLYPHLP\PEVD\PRLDL SPFSQIACSMGLSS*LKGGLGSTRVPGR KNY*HSERLWDTIQY\SKVHP\AVVDHFL PTFFLRAPLLVFIVVFKLCVELAGLL
4329	12380	A	5244	24	493	HWQVLPRVKKRLSPLKTHNCALPSTKLS AVRDYLFYSEN\NFPQLNKDS*RG\CA LK/SPTAVV\FVLSLSHSFSAVSEGCFHR ERQVASTSMEQLLSLLAGIPFVEDSCPLQ KELSKTLPLTLEV\LGVSMMFFKFSWLPVI WVFGFISQLSGLES
4330	12381	A	5245	1	4547	MRNPVHSHIGATVSHQTD\FGANVPNMP ALQSQLITSDTYSMQMQMIPSNSTRLPV AYQGNQGLNQSFSEQQVDWTQCCISKG LTPDYRPPPKLYRYS\QSF\LPDSTIQKQ NFIPHTSLQVKNSQLLNSVLT\PSRQ\TSA VPSQQYATQTDKRPPPPY\NCRYGSQPL QSTQHITKHL\SM\EPQ\SR\EL\SS\EIRTSF QQQWQNP\NENVSTIGNFTNLKVNTNSK QPFNSPIRSSVDGVQTLAQ\TNEEKIMDSC NP
4331	12382	C	5246	191	397	MLPRAGLLLCGKLV\PN\NFSQPSRQILLCL GCDSPHLTVGHEGWKTTLPGAGATPYRI GPFSLLQRGVS*
4332	12383	C	5247	598	744	MSKVLNQSTYITVQC\GYVSINSFYVSFY YSIKLAKRHLGTFRTVLVI*
4333	12384	A	5248	164	355	NGSTGCIGIQANQYFNYSLS\SSFESGKFV KCTEQLELVPGENIH*\LLEGSKKLT\TK NLFRNM
4334	12385	A	5249	1	308	KVQSFFIFYLFIY*DG\VLFRPGWSAVV LSRLTATS\A\FRFKQF\SLSPSSWDYRC PPLHLANFCIF**RRGFTMLARLV\SIS*PQ VIRPPWPPKVLGLQM

4335	12386	A	525	219	471	INFKKKNRLFNK WY WTCVATLEKNKM NSFLMIYPKSNK*FKNPVNRGKKL*NLF ILLYFKF
4336	12387	A	5250	67	367	SDELRTPGRESLPAENISL*DRVNHQPAIE SCTA*NYLYSINAKTKGEMLEAEGMRV VTNSVYHWRLCEKQQT VLMKAGCWRT DKLCLPPEGMLWAVMSR
4337	12388	A	5251	1429	1621	IPWIPPVSRSMVTHTWRAPTRFVHLPFFQ TDPFVFVFISAFVLLRLVQKQP*QVVPDQ GPERGR
4338	12389	A	5252	180	411	IPWIPPV/CPFHGHHTLE/VHPHGLSISLYS PPADSPVQGFVVRILSFTFSALADLPRSG PWSDTTCHGCFTVAASSESL
4339	12390	A	5253	288	530	
4340	12391	A	5254	9	257	IFTAVAFIISESWKQPQCL*TNE*/IKLWYI HTMQYYSIAKRNEKLIHATTWMNSEN QW*KARHKKPHIV*LHL YEGSQKRQI
4341	12392	A	5255	6215	7038	RTVTTFLSKDSHGVYCAQGGKIPDHQNP QCNRKQHPVSTILMLDKASFCLRRKH NLSVNCINRNPMSLKNTSWHSSLSVTQ RHQQQSKLHFQGSILLH*PSQNIL/SNI*K CINYC*HCSSVLLSYLFIETESYSVAQAG VQWHDGLLQLLPLRFKQFSCFSLPSSW DYRSAPSCPANFCILVEMGFCHVGQAGL KLLASSDPALASQSAGITGVSHYTQPCS PFLKSTGLFSCKVLSPYHKGRIYLGRM CFLNSTWHLVKSTLFCPLFI
4342	12393	A	5256	2	513	VLIQLVWIALLLVDPSPRVLTKDEPASS TSSFTSQSKKGQSGFLQSRN*GCIALC E/VFQREEIY*VGMD*DSFRIKWFFNFIFH LTVITSSDLHIHGEIWVVPNTD HVCTRFF FVYDDCLVVYAYINTLL*GFY*YILLVIV NYTGSVHWFIYYLVLNVLCFLLYI
4343	12394	A	5257	1	274	STPPHSSQRACEPLPSFAQCP*APSPAP HCALICPIPKMEERP/PM*IGR*RRHLLST YCARSCTEQAPCILLNPHNVLDLSRLW VKGG
4344	12395	A	5258	3	436	GYLSEVVEENTPPKMEKEGLEIMIGKKK GIQGHYNCSYLDSTLFCFAFSSVLDTVL LRPKEKNDVEYYSETQELLRTEIVNPLRI YGYVCATKIMKLKILEKVEAASGFTSE EKD/PAGQKVQDCYFYQIFMEKNEKVG VPTIQ
4345	12396	A	5259	1	340	
4346	12397	A	526	1	1423	MNPNQEEISDLPERIQETEKEGTL PNSFY EASITLIPKLGKDKTKKENYRPISMNIE ANILNKILANQIQHIKKIHHQVGFISQ MQGWFNHRSINVIHHINRIKKNHMIISI DAEKAFDKIQHHFMIKTLKIGIQGAYLN VIKAIYDKPTANIILNGKKVEAFPLRTGT RQGYPLSQLFFNIALEVLARAIQENEIK GIHIGKEKVKLSLFAGDMIFYLENPKDSS KKLLELIKELSKVSRWELNNENTWTQGG EHHTPGPVVGSGEERGIALGDTPNVNDK PLTGAALASTLGVWENENKFTHLFNIHS QFCLPSQGIFFLCGTSTYVCLTTNWTSTC TLIFLSPKIDIAPGNQTLPPVRAQVHQH RAVQIPLLIGLVGTNATGTGIAGLSPSL YYHTLSKDLSDSLQDIKSTLTLSQIDS LAAVTLQNHRLRPPNRRKRWAMHLFR GRLFFHQPVWD
4347	12398	A	5260	215	384	

4348	12399	B	5261	347	1742	MPNTNGSIGHSPLSLSAQSVMEELNTAP VQESPPLAMPPGNSHGLEVGSLAEVKEN PPFYGVIRWIGQPPGLNEVLAGELEDEC AGWYGWNLQEGTRYFTCALKKALFVK LKSCRPDSSSVLDTVLLRPKEKNDVEYY SETQELLRTEIVNPLRISAGQKVQDCYFY QIFMEKNEKVGVP TIQQLEWSFINSNLK FAEAPSLIIQMPPRGKDFKLFKKIFPSLE LNITDLEDTPRQCRICGGLAMYECREK YDDPDISAGKIKQFCKTCNTQVHLHPKR LNHKYNPVSPLPKDLPDWDWRHGCIPCQ NMELFAVLCIETSHYVAFVKY GKDDSA WLFDSMADRDESNEFVQITGVIGK GK ETEGRVLTLHLIRAGSSVHVHCRQWMSL W*
4349	12400	A	5262	1	1547	PVQESPPLAMPPGNSHGLEVGSLAEVKE NPPFYGVIRWIGQPPGLNEVLAGELEDE CAGCTDGTFRGTRYFTCALKKALFVKL KSCRPDSPFASLQPVSNQIERCNSLAIWE AYLSEVVEENTPTQKWEKEGLEIMIGKK KGIQGHYNSCYLDSTLFC LFAFSSVLDTV LLRPKEKNDVEYYSETQELLRTEIVNPLR IYGYVCATKIMKLRKILEKVEAASGFTSE EKDPEEFLNLFHHLRVEPLLKIRSAGQK VQDCYFYQIFMGKK*GKLGVP TISGSC*E WSFINSNLKFAEAPSLIIQMPPRGKDF KLFKKIFPSLELNITDLEDTPRQCRICG GLAMYECRECYDDPDISAGKIKQFCKTC NTQVHLHPKRLNHNKYNPVSPLPKDLPDW EIRHGCIPCQNMELFAVLCIETSHYVAF VKY GKDDSAWLFDSMADR DGGQNG FNIPQVTPCEVGEYLEDVSWKTLHSLG LPGESQGCARRLLCDAIYVPCTQSPTMS LYK
4350	12401	A	5263	29	258	LRKYHATDLIS*GSVVGEF DCCF SFLDG SLEDAVDGLLALALQPHKEQYKEFQDLN QEVMLDDILKVSTFSQKLD
4351	12402	A	5264	98	497	THENNYNEKKDEIKIFKISLQISAQEEFFP FRRWKSCLCCPRLGVQWHDLGSLQPT SP/GFKRFSGLKLP/RAAWIYRYVPITSG* FLYFQ*RRGFTHVGQADL DLTSGDPPV WASQSAGITGVSHHAQPPYC
4352	12403	A	5265	156	1047	VPAGEARVQWHDLGSLQPPPPGSSDSP ASSSRVAGITGIKTNTICKKCAQNVQLYG TPKPCQYCNIIAFIGNKCQRCTNSEKKY GPPYSCEQCKQQCAFD RKDDRKKVDGK LLCWLCTLSYKRVLQKTKEQRKHLSSSS RAGHQEKEQYSRLSGGGHYNSQKTLSTS SIQNEIPKKKSKFESITNGDSFSPDLALD SPGTDHFVIAQLKEEVATLKKMLHQKD QMLEKEKKITELKADFQYQESQMRK MNQMEKTHKEVTEQLQAKNRELLKQA AALSKSKKSEKSGAITSP
4353	12404	A	5266	156	960	VPAGEARVQWHDLGSLQPPPPGSSDSP ASSSRVAGITGIKTNTICKKCAQNVQLYG TPKPCQYCNIIAFIGNKCQRCTNSEKKY GPPYSCEQCKQQCAFD RKDDRKKVDGK LLCWLCTLSYKRVLQKTKEQRKHLSSSS RAGHQEKEQYSRLSGGGHYNSFSPDLAL DSPGTDHFVIAQLKEEVATLKKMLHQK DQMLEKEKKITELKADFQYQESQMRK MNQMEKTHKEVTEQLQAKNRELLKQA AALSKSKKSEKSGAITSP
4354	12405	A	5267	4	496	DGFPSCCQAGVQ*HDLGSRQPPPPGSSD SPASASRVAGTTGMHH*SRDVLIRILELE EGLELCPHF SVRKLPKTGQILTLMLSLAP VKLAPQPKLSWMELTRTQQAVPSPFGR WGGIGRRKVLVPIAADGWASGQARGLL GGSGKGEGKATGCERE GTCLLQG

4355	12406	C	5268	190	435	
4356	12407	A	5269	114	267	QLYINHPPPLSKSKEREMDKKDLKSR TLKQKQKPLVNVVHNSWF*DHSN
4357	12408	A	527	31	332	
4358	12409	A	5270	1	1071	
4359	12410	A	5271	1	1231	GRFLCCMLETVTRWHS DRATYEKECGN YPGFLTILRATGFDGKNKADQLDYENFR HV VHK WHYKLT KASVHCLETGEYTHIR NILIVLTKILPWYPKVLNLGQALERRVHK ICQEEKEKRPDLALAMGYKJIF*CDLQ D*MTEGF*RL*NVLQC*SLSSAFRRLWEI MRSCFHRLVRVTTS DYQLPVYTG**FF*S HV*YFLIGRKYNFIII VNRSSRVKKKKPS* FKD*FIGKL*FLRKLGV L*KPSRTY*KWV FFNSLEPHSRMNNLLILFLKTSCLCFLIW VCIFKHFVRLSSYSGQLKK*EKSIP*YPEN EFPSQRPPPPRNAVAISVQNGP/GGGPSSS SIGSASKSDESSTEETDKSRERSQCGVKA VNKASSTTPKGNSNGNSGNSNKA VKE NDKEKGKEK
4360	12411	A	5272	2	3383	ITDQVLLPSLSLMDCNACMSEELWGMF KTFPYQHR YRLYGQWKNETYN SHPLL V KVKAQTIDRAKYIMKRLTKENVKPSGRQ IGKLSHSNPTILFDYVCFEILSQIKYDNL ITPVVDSLKYLTSLNYDVLACILSNCHIEA LANPEKERMKHDDTTISSWLQSLASFCG AVFRKYPIDLAGLLQYVANQLKAGKSF DLLILKEVVQKMAGIEITEEMTMEQLEA MTGGEQLKAEGGYFGQIRNTKKSSQRL KDA
4361	12412	A	5273	442	1457	KHFLYIYAQMNCFSRLRKKKKKKNQLL LQVFSSADE*GSSSSSSSSSGHRRHKKHK RNRSESSRRSSRRHSSRASNQIDQNRER* VLPSSS*YFSIFSFP*TRSGRKLKGQDR LQYEKTQIKEKDRCPSSSSLEIPDDFGG RSEDPRDFYNSYKTQAGSSKTEPKYKSEA DIFPARRNSSDSFCRNSEAKIYGYRRFEK DIEGRKEHYRRWEPGSVRHSTSPASSEY SWKSVEKYKKYAHSGSRDFSRHEQRYR LNTNQGEYEREDNY GEDIKTEVPEEDAL SSKEHSESSVK/NKFTSEFTEYI*SDS*I*K RKRK*GQKINTPKDIGHPLPQNAH
4362	12413	A	5274	2	457	KLIFFPRKPSAPQEGRQFC*KIGNRPTQL TGPVMPVRNVYKKEKARVITEKEKNF QSPCLVFVMARAK\ARL\FGIRAKKSPRK PQNQDVEKEKIKTLPGNFEISLAVMPGSP TWCVSVGTTWALGWGFTACDFFLLPRGF GAFLKRQVQAPG
4363	12414	C	5275	27	158	MH SKPTGQVSWLGMTTASLPGTNASSM WMPWRLEDHSNLDALP*
4364	12415	A	5276	1	320	
4365	12416	A	5277	100	659	CPLVIRSCSSALWDIETGQQTTFGTGHTG DVMSLSLAPDTRLFVSGACDASAKLWD VYSQCFFLSVYMMS*FAFSQFFPNNGNA FATGSDDATCRLFDLRADQELMTLTPHD NIICGITSVSFSKSGRLLLAGYDDFN CNV WDALKADRAGVLAGHDNRVSLGVTD DGMATGWSWDSFLKIWN
4366	12417	A	5278	16	495	AFSAPDTRLFVSGACNASAKLWNVGE GMCQTFTTG HESDINAVCFPPNGNAFAT GS\DDATCRLFDLRADQELMTYPHDNII CGITSVSFSKSGRLPPGMGTTNFNCNVW DALKSRTGQVFLAGHDNPRQPAWGV T\DGMA\ VATGSWDSFPQDLGN
4367	12418	A	5279	5	108	SRGFTLLARLVLS*PQ/CDPPLPLASQA GI/TRLGMSYHA*PIIFETR SRSVTQDG/G VQ*CNHGLLPWHPGLKESSCLSLPG/G HAPPHLANFICRNRVSLCCSGWS*TSSD

						PPLPLASQSAGIIGWV
4368	12419	A	528	27	178	
4369	12420	A	5280	1	458	
4370	12421	B	5281	403	629	XVHLVKASCQACGQLDRVRKQVNNIPS FIVRLDSQKHIDFSLRSPYGGGRPGRVKR KNAKKGQGGAGAGDDEED*
4371	12422	A	5282	1	637	PVARSWVCRKTYGDPGGPFKE\SRLDQ VELKLIGGVWGSGBKREVL\RVKFTLAQD SAKAAPGNWLT\LEKDP\TGVL\FERQTP LLR/RGLVPQLGCWDEGQKMK\LDYTPG P*RLEDFFRET\PKTQVFQSLGLAKSIHQ PRFACLSRQRHIRVRK\QV\VNIPSFIVR\ LDSQKHIDFSLRSPYGGGRPA\RVKRKN AKKGGAGAGDDEED
4372	12423	A	5283	3	295	VCIGVLLCCLGCGVRWHDHASL*P*PPG LKRSSHLSLLSTWDHRHMLTHPLNFFIV EPRSHYVAQTGLKLLGSSSPASASQSAR ITGVSHHTQSKK*FLFVEPRSHYVAQTGL KLLGSSSPASASQSARITGVSHHTQSKK
4373	12424	A	5284	2	284	
4374	12425	A	5285	1	785	MTGLALLYSGVFVAFWACALAVACWV NSGTDWAGGIWLERLLPRSRLGFLAGG DPACAGVCYTIFDLGFRFDVAWFLTETS PFMWSNLGUGLAISLSVVGAAWGHSLT GSSIHVVEGS*KAPRDSKTKNLVSIIFCE AVAVYGIIMGNCSLSNMTPEFSATEPQG HRQFGN*PWQGYSHGLGAGLHRKPCLN LFCGVVCVGVGTWGPCWQMPQNPTASL CKRFSIVEIFWQAPLALFGVIGRKFFKTS MSERWVTR
4375	12426	A	5286	2	350	
4376	12427	A	5287	1	999	NLLKTHKFLLGQDEDSLHSPVAQMGN YQEYLKTLASPLREIDPDQPKRLHTFGNP FKQDKKGMIDEADEFVAGPQNKVKRP GEPNMSYVTKRRRSMSLLLRKPQTPPTC NNHVGGKGPPSASWFPSYPNLIKPTLVH TDATIIHDGHEEKMEENGQITPDGFLSKSA PSELINMTGDLMPNPQVDSLDDFTSLSK DGLIQNLVVTHL*EEPKTAASP*MTKKT Q*HLLWELCQIHYKSLLLWHKE/VNADI KHQLMKEVRKFGRKYERIFILLEEVQGP LEMKKQFVEFTIKEAARFKRRVLIQYLE KVLEKINSHHLHNNISHINSRSSC
4377	12428	A	5288	329	661	ITLSLLSFFNLRPSFALLAQAGVHWRDL SLQPPPLRFK*FSYLKSPRSWDYGHAPP RPANSVLLVETGSLHVSQGGILPTSGDP PASASQSAGITGVTCARPPSLFS
4378	12429	A	5289	46	554	NKTRKDPFPYTPAHGHTVPTPSLPG/C SAHGHLKPRGSHCDQPPSTCRPPVQSPV AHASQVAGRTWA*KRALHLPGGGVKRG GTGSPKAPRSGCGLPYKLGSTARAAGSC SPAE/EPETFSPQGQPLPVNKGKLRVGGQ PSFQCAPRDCSRYPQFGEEQGRAIEHQI P
4379	12430	B	529	110	719	XGRQQHQRWHETPDIKLFGKWSTDDVQ INDISLQDYIAVKEKYAKYLPHSAGRYA AKRFRKAQCPIVERLTNSMMMHGRNNG QEAHDCAHRAQLRDHNTCSQAKNLL VRGTAINSGPREDSTRIGRAGTVRRQAV DVSPLRRVNQAIWLLCTGAREAAFRNIK TIAECLADELINAAGSSNSYAINKKDEL ERVAKSNR*
4380	12431	A	5290	228	386	

4381	12432	A	5291	3	257	GPRERETGRTATAVEPDSCEERTYSNDT KRWCSHPGGNGGVPERQHLG*ATGSW GAKPLRLAAATRASGNPGHRSKCLETI F
4382	12433	A	5292	3	1379	NEFFGEGKTLQAAHFAMKALQALQN EPIPERSPQNGESGKMDDDKDANKSEI SLVFEIALKRNMPVSFEVIKESGPPHMK FVTRVSVGEFSAEGEGNSKKLSKKRAAT TVLQELKKLPPLPVVEKPKVHFFKKRPKT IVKAGPEYGQGMNPISRLAQIQQAKKEK EPDYVLLSERGMP*RREFVMQVKVGNE VATGTGPNKKAKKKKINVAVAMLLQLG YKASINLQDQLEKTGENKGWSDPTPGFP EPTNNTPKGILHLSPDVYQEMEASHHKV TS/GHYSRLFVTQRYEPTFKLFSSVYLPH RIVQSTFARHLLMNGTSSTAEIAGLKSS PVLVPPVQPSKQLGIFSKGFAFRVHYC DRQKWQRVCDLSDISPCADGL/SHAIGSS IEASHDQAALSALKQFSEQGLDPIDGSM NIEKGSLEKQAKHLIKKVDHNQAPPGSIA HDCKISNSAV
4383	12434	A	5293	7	351	SSTSLIRKMQIKTTRYQNIPNRMAMIKNA DNTKL/WSRILTNYWWEYRHLHK*KYV HKKTCNFMILIAALFIKFLKWKFKHSST GE*IIKL*DRHMTTEYY*AIKKAQATDRM QHE
4384	12435	A	5294	3	1585	GEPLI/LHHTTCH/NSKALIAFLAFLIIVTSN ALLVVL TNIDYDLHRKRSCNVDEQQLVE RYDESNLMNVQPIHADIMLETYHRRIAW EGRLFLAEFQSIPRVFSKFIKEARKTHN QNKNNRYVDILPYDYNRVELSEINGDAGS NYTNASYIDGFKEPRKYIAAQGPRDET DDFWRMWEQKATVIVMVTCEEGRNRN KCAEYWPSMEEGTRAFGECCCKDLTKH KRCPDYIIQKLNIVNKKEKATGREVTHI QFTSWPDHGVDPHLLKLRRRVNAFS NFFSGPIVVHCSAGVGRTGTIYIGIDAMLE GLEAENKVDVYGYVVKLRRQRCLMVQ VEVCSNL*DYSHFGFLDLNLFQVIIMIFF KNPNSSQPQTVDLFLKTKTW*SPWPML CIW
4385	12436	A	5295	1	1323	MEDSRKAQKRDTKIEREEQLYWPSRKS GKSKGDLVLHTTYKPSHSGGRAVSGLFG SPIPSLGSWTAFLDPPWARVEPIALKGLT QRSPNGGGHRCVFPVAPPDGEQKKR LCSFRRKEQSLPGNLENSFGSCPRLSRQY VYESARTTALMRLGCPLKQIQLISQDLSP FEYRESLPMKDKQNKHQIRISINTIQETI ISPNELSKSPGTNSGETEIHDLSDREFKIA VLRTLKEIQDNTEKEFKLYQINLTKEIEI KKNQAEILELRNAIGIQKNASQSFNSRNG REEEIISELENRLFENTQRRQNKRIKNNK ACLQDLEYRLKRANLRVIGLKEEVEKAI GVESLFGIITENFPSLEQDINIQQEGYG TPSRFNPCKTTSRHLIVKLPKIRDKERILK VTRENKQVT*NGTHICLAADFSVVAL*A RREWH
4386	12437	A	5297	3	226	GSGCEQGCPPGRYGPGEQCLCGCLNGGS CDAATGACRCPTGFLGTDCNLTCPPQGRF GPNCTHVCGCGQAACDPVTGTCLCPP GRAGVRCERGCPQNRFGVGCEHTCSCR NGGLCHASNGSCSCGLGWTGRHCELAC PPGRYGAACHLECSCHNNSTCEPATGTC RCGPGFYGQACEHPCPPGFHAGCQGL CRCQHGA PCDPISGRCLCPAGFHGHFCE RGCEPGSFGEGCHQRCDCDGGAPCDPV TGLCLCPPGRSGATCNLDCRRQFGPSC TLHCDCGGGADCDPVSGQCHCVDGYM GPTCREVGPSGSPRTRP*PRGPAAAPLGS

						SGRTATSPVRRASAPTAPTCVGVGRGR PATL
4387	12438	A	5298	152	990	LLIHSEKPFEDNLYGKALSSNSHLHGP RRLCT/GENPEE/CEQL*KAFSAISRDCD SSH*GRKPVKVSEGFSDSHPLRHTGNHT MEQHSEMRNTLQKCSHY*ANYSVVF S*LWESLECSIGF*GDLRINSGENAPFEHH QYWRAFWFSTFVKET/W*SIHTEK/PWK F*EEKAFSDASVLGK/HMELLPGCKTYE YINIGKFFSDSSLSCI/WRELTWRNP*ECN QC*DA/FSLNSSLG/HQFSLGTTKYNHC FECGISFIQCLICRLDCWLINFFSLFF
4388	12439	A	5299	1	181	EIEDLN*TITQLYLT*HLYRTLHRTTPPAYK FFSSVHETFSRIDHVLEHKTSLNEF*RLK
4389	12440	A	530	443	565	QPGFGAGARAPNILTHKHLG/LLEFKTTG AQQQGF*LNESSF
4390	12441	A	5300	1	170	PPPPPFPLIPD*G*APPSPLSPGQLQLSAPP VLP CPDITLSYPGRRPVLGLSLMD
4391	12442	A	5301	846	1094	IPAL/P*FYFIVYLNILKYLFFFFD/DGVL LCCPAWSAVA*SRLTATFASQVKRFSC SLLSSWYYSVP/SSLANFCIFSRDG/SFIV LAMLVLNS*PQVILLPWPVKVL*LPIMEC SSLTIAHCSLNLPGTSNPPASASK
4392	12443	A	5302	19	391	AYPLRGGRDFLRGGPSRSVSLSVVPAR V*RRRRRLREEARGAMTSASTKVGEIFS AAGAAFTKLGETMQLHPVADSSPAGA KWTEIEIMLRAAVKRFGDDLNHISCVI KGPDKGHCETQGI
4393	12444	A	5303	1	338	SLIFSDSLSSISGTNTLAFLSWMLPYIPW ILQARPALGLLHLLAACNVVGQSAT*PS PSLPLGLCSSSHSQ*GLF*PPVFKISPLTD NPNPFDLHLMDFIQKTIKISL
4394	12445	A	5304	3	180	
4395	12446	A	5305	1	518	RAAQSPCSPWSRLACSGGGGVIREEARG AMTSASTKVGEIFSAAGAAFTKLGETM QLHPVADSSPAGAKWTETEIM/PEGCC EAIWGRS*SHQLCHQGTDSGPDKGHC*N ARYIEDFWASPPA*V/IPRKGPRRWASG VVFVHLLQLAPPPQLPVFPEGRGSPPIKE TERLM
4396	12447	A	5306	1	705	GAKFQRTSRVPRTTGPGQLKCLEDKVS LETELDEEKNTVELLTDR\LNRRDQVD QLRTELMQERS/SSGRTWKCDKISLERQ NKDLKTRLASSEG/SPESLVPASLSLPRI SCCRERLPAEQRVKTVLRSTNRKLERKV N*LSLQIEDERHHVSDTKDQLSLRVKAL KRQVDEAKEEIERLDGLRKKAREVEE QHEVNEQLQARIKSLEKDSWRK/GFPLS C*VSSQKRRAELR
4397	12448	A	5307	831	1159	DVKSKSFFFLRWSL/NPFAQAGV*WHD LSSLQPLPHRFKQFSCLSLLSS*DYRRVPP *LANFLYF**RQGFTMLARLASNS*PHDP PASASQSAGITGMSHRTQKKQIS
4398	12449	A	5308	296	526	FNCCEEEKFKKKPCFVSFLEGLERG*VK CQEHIPDTH***LLGLSEQINSDSRLRKEL NHFILFLEQLTCPPHSRER

4399	12450	A	5309	5424	5957	YNFFLNEMGSCSVAQAGVQWHNHSSLO P*TLG*SSYHPASAS*VAGTVCTCHHVQL VF/IFFFLR*SFALVAQAGVQWCDLGLSLP PPPSGFERFSCGLPSSWDYRRPPLHLVN FFFLYF**RWGFTMLARLVNS*PHDHP ASASQSAGITGMSHHVWLNFFFNCKSLI FSNVFRN
4400	12451	A	531	82	986	TMNTRNRGVNSGLGASPARPTRDPQDP SGRQGELSPVEDQREGLEAAPKGPSRES VVHAGQRRTSAYTLIAPNINRRNEIQRIA ELELANLEK WKEQNRAPVHLVPRRLG GSQSETEVRQKQQLQMQSKYKQKLKR EESVRIKKEAEEAELQKMKAIQREKSNK LEEKKRLQENLRREAFREHQYKTAEFL /RQTEHRIARQKCLSKCCLWPTILNMGQ KLGLODSLKAENRKLQKMKDEQHOK SELLELRQQQEQERAKIHQTEHRRVNN AFDLRL/RRQKSTRWPRAJWRLLYE
4401	12452	A	5310	2	237	IKRFSYLSLPNSWDYKVPSSMPG*FLYF* LR*GFTNVGQAGFEIP*PQNDNPLSSQS AGITGMSHHNRPLFYFLK
4402	12453	A	5311	36	386	LNIHRKFMLLYYH*LLLFLAFHF*DRVSV CHPGWSTVVNSQGFTAALTYWVK*SS CFNPPCVSWEPRGACHHALANFLIFCKN QVSLCLPRLVSNSWVQAILPSWAPPRRA GIYGV
4403	12454	A	5312	1	310	FFFFET/ESHVAQAGVQWGDGLL*SSP PGSSDSPASAS*ASGTTGA/QHHAQLIFV FSVETGFHPVSQDGLDLS* SARLSLPK SWDYRHEPLAPGLGFTF
4404	12455	A	5313	598	882	LIFFLSFFFFSFFFFFFFFFFFFFFFFFFFF FFFFFFFFLLLLLLLLLLLLFFFFFFFFFFFF LRQSL/DSVAQAGVQWRHLGSLQALPPR FAP
4405	12456	A	5314	439	1169	QSGHRYLYNIIQVLCFTIFLRLQDLAV L/TQAGVQWC/DSWQPRPPGLKGTPTS AQVAGTTGMCHHTR*IFFFFFFFFFFFFFF FFFFFFFFFFFFLRQSL/DSVAQAGVQWR NLGSLQPLPPRFKRFSCGLPSSWDYRN APHPANCCIF/M*RRGFTMLAKLVLSNG DSPASASQSAGIIGVSHHARPPRYFKKYI FCRDGGLTMLLGS*TPGLKQSSHLGFP NFWDYRCEPPCLATLFI
4406	12457	A	5315	1	222	ETGSHFVTQAGV*WCNLGLLQPLTPGLK QFSLSPSSWDHKCVSPSCFANSFCTLG K*RRVSTMLPPGWS\QTP
4407	12458	A	5316	1	234	LRQSFAGWPRLECNGTIPAYCNLHLLGS SNPPASSPR\RLIFVVLVEMRFLYVA*AG LELLSSDLPPWHRKVLGLQA
4408	12459	A	5317	1	196	FFLINLTLLIVTAQFIN*LDFIDSYSTICPK PPEYTFFSRA/PNGTFTTKDHILGFKISLN KYKSI
4409	12460	A	5318	1	477	SCWSPVWGHPPRDREPPPS*LGIQSSPG VPQAALPPWSPASHQASATWAVLPLPP LQGPAREPPCPPHLRRHVQPTKTSVLSIL SAPPLPPG*DLPEASFSQWACKGINKCL QGLGLVCCRTEHKDLGLGLFGPLVLAM VEVRGVDLTENNSGASVPRGR
4410	12461	A	5319	139	398	FYFFFYFLRQSCSVNQAGVQ*/HCLNSL QPPPPGFKRFSCLSLPSRWDYKCPPCTP NFCVFS/EMGFLHVGQAGLELMTSGDPP GFG

4411	12462	A	532	122	1340	EAASKTTKDNICSWKDDTIGCKEMPTSE NCPSFALHQISDRNHGECREYGKTLCO DSKPVQHERIHSSEKPNRCKEKGKNSN GHQLTIHQRLHVGEKPYKYEKCGKAFIS GSAFVKHGRIHTGEKPLKCKQCGKTISG SYQLTVHKSHTGKKPYECGECGKAFLV YGKLTRHQSTHTGEKPFGECECGKAFST FSYLQHQRIHTSEKPYECKEKGKAFSTS SPLAKHQRIHTGEKPYECKEKGKSFVY GQLTRHQSIHTGEKPFESHAIEKPYRCK ECGRTFSRASYLQHGRLHTGEKPYECK ECGKAFTSGSYLVQHQRIHTGEKPYECK ECGKAFTSRHQLTVHQRVHTGEKPYECK ECGKAFRVHVHLTQHRKIHTDVKPYEC KECGKTFSRASYL
4412	12463	A	5320	11	137	RWGFTKLPRLVSNWPQAILSPWLKVL NNHREALYFSLYISKYTEGQFRNLYP GTICQDYLWRYLLFLFIFETESCTVIRLEC SGSLQPPPPRFKQFTCLRLHSSWDYRIRP PWPWPFNCISRVQTFHHVGGQGLDLV DLCDPPASASQSAGITGREHPAPGTYLW EGFKKSFKSRA*RTLFFPLH
4413	12464	A	5321	1	293	LERMSFGHIQTKEDILQENTIFLATEVQIQ PNPD*TPEAKAFNRCLSYRKEDRIDVH QLTCDPYLMPHMRMSVSTCSPAGAAIAS TSGASSSSSN
4414	12465	A	5322	3	291	
4415	12466	A	5323	14	943	HRILEPLIFHFFFSSAPPQPELLY/PASL TLPASPGREEVYPLPARLPSLPRWEPLQV WLALGAVKLPLSPWSPNGLGKPPGT PKRRGALFCHMPGILTP/WMPGARWTKP PANPPST/TSPVPPKDG*KLQPGGLRGKP GPERGWNPPCP/RSPPPYLLC*PQTLPR A*CFPIPKMSFTGHSPCRASLGHLE/VGH GIPLWPRVCQRRKSRAFFVLFFFKGACLF NVNNRKP*YLCNTE*YFNVHVLVDVHNI FTTKQQUEST*PWLPRGVSWLGAGGGYQG AWDREAPPRPIPKLPPTLASRMRSCHL
4416	12467	A	5324	12	486	
4417	12468	A	5325	51	390	DGVLPSLLGWEVMCGSSAPLLRSPVDRL DGMWGVCHP/GWSIVAQS/QFTAASNLL ASRAT/LSLPSSWDYRRVPPHSAHFKFFL *KWGLAMLPRVLNSWSQVILLQPPKV LEL
4418	12469	A	5326	279	380	
4419	12470	A	5327	618	818	
4420	12471	A	5328	1	197	
4421	12472	A	5329	2	498	CPRMTPKDFQ*PVL/VVTNLLGHVIDIKW MSIAFINDRAWPSAFVSDENHARIQCDG QHRFEVSSELDETDVSSTVLDLDHQG LGPPPPPAEPDPLQLLLQQLFGLGQLSCV VGPGPWRGLSSARDKQNMVSIHKVKR PQSPLRAVYWPLRYCILPSRRATVN
4422	12473	A	533	456	824	DRVSLSPRLECSGVILAAQCNLHLP/GFNR FSYTLGLPSRLGITGHAPCLGQFFVFLVE DGGFHHVG/QAGLELLTSSDPPTSAPVKC RDYRHEPLRLACCSFLKQENIHNCWVRI YRIFQTN
4423	12474	A	5330	600	811	PIWLSLSPWHFINQRKEKKK**DIVKREK PLMGLSTLTSI*MQSKPRKEHQINLKSEI K*LQDLSQYFGR
4424	12475	A	5331	1	75	FFFFFFFFFKLAMFVFIFFIFSK*KEIVLS QFLFVFL/YLFYVFTSLKVALKISRDIKST FLRVALFFLNNSWEFCGSTAFPSVSML CMF*LLL*FFFFFFFFFKLAMFVFIFFIF SK

4425	12476	A	5332	949	1711	VTIPLIPDLKGSSCVGPPKP*DCRHWTPC LTLIYFFFFKVESPSVAHAGVQWHDLSL LTLSPDQV/HSPVSAF*VAGIQG/MHHHA RL/IFFFFFFLRQSL/SSVAQAREQWCYH GSLQPPPSGFKRFSCSLSPSSWDYRCPPP HLA/DFVFLIEMGFTMLTRLVSNS*PQ/C DLPASASQTAWITGLSHRAWLNFFCIFI YGVSPCWPGWSLTPDLK*SACLSLP*CW DYKCEPPCPAQFTFIRKDSFADVYCSVS
4426	12477	C	5333	11	154	MESRSVARLECNAGISAHCNLHLLGSND SPASASRVAGTTGTATTGP*
4427	12478	C	5334	163	270	MNMESLFCFNADILIKQDYFHHHQHL YIYTKPV*
4428	12479	A	5335	92	404	WLQICVSGCICT*MALYICINVVVVKV LFYEDVCIKAVK*AFHFIHNLMCVYICM CVCVWNIEGLYIPQRYIHMAVLLHRSN SQTPGSIRYKFKISFIGFI
4429	12480	A	5336	2	1100	FALAARLQEFGRKYFTESGLVGLLEQA AASFMSMAGMYEAVNEVYKVLPIHEANR DAKKLSTIHGKLQEAFSKIVHQSTGWER MFGTYFRVGFYGTKFGDLDEQEFVYKE PAITKLAEISHRLEGFYGERFGEDVVEVI KDSNPVDKCKLDPNKAYIQITYVEPYFD TYEMKDRITYFRQKLQSSVRFMYCTPFT LDGRAHGGTSMEQFQKGRPILDYVSCL FPYIKTRG/PMSLIKKRSSLHPFEVAIED MQKKTOELAFATHQDPADPKMLQMV QGSVGHQVNNQGPLGSCPGFFCSGNT** PKALSDIH*KLATLAFKDFTKCEDALR KNKSLIGPDQKEYQRELGEKLSSALKRA LPAT
4430	12481	A	5337	48	1057	RCWENCTSTCKTMKSDPYLR/PYTINSK WIKDLNVRPETIEENIGEFKLDWMTLGN FLDITPKAQSTKTK/DKWDYIKPKSF/CTV KETVNMKMQ*PTD/W*KIFVRHIYKGL VSKIYKEFIQLNF*KWAKDLKRHFSEDD TQMANRYIKGCST*LIKEMHFKNHISKY YLSPVRLAVIKKNKNNKC/W*WCGIKGT L/LHCWWECLVQPLWKTEWKFLARKIK LPYDPAIPLGIYSK*MKSPPCKYICS/RV FIAALFIVA/K/TWRQLKCP/LV*IRKLCI YMPYTPMEYYPPLKTKKNPTISCHLLPT WMGLKDTVLNEISQTEKKILHNFTIYVES KKKI
4431	12482	A	5338	2	409	PLALALAMAYPSCPGDAHGP RPGLSP PS*PASVP/TSP/PQSSA*FLCPQSYVEGL TPRILPAGGGHVPCSRPSSPGLASVSAP RWGALLPGPCPTSLSSGCRKGRASPRA HPPPTASLCTALWPPCFSP*PGVGLNG LSLLPRRCTWPAARSTVSSLLACLCPNS PLNLLRDSSVLSHTQLRGSPHGFYPLEGA MFPAPALPPHQALPRYQPPGELCCCLD HALLSPRDVGKGGPALELTHPPQQACV LRSGHLASRLHNL
4432	12483	A	5339	32	323	KFHLGGGGWFPPLFPGPGGARGVGS*VR GFRPPWAPPLNPPFPKPNQSPGLVVF RPSSSGG/PGPGNSPHPGGQGF*QKFRP CPSAWGTKGGFP
4433	12484	A	534	1	2278	
4434	12485	A	5341	4	329	IIAHCKLKRPSNDPPQPPSSWDCRHAPP HPAN*FFF*EMGSCHVAQTSSQTPALNPS RYPPTSASQGAETVMASHCAQLYPCFLT KEK/FSHS*IRRLLSETSNGEY
4435	12486	A	5342	3	274	FQSQNIKLNLMGVLFCEFAHSVT*AG LQWLDLSSLQPPPGFKQ/FSCLSLSSW DYRSPRGPVNFICFSGDEVSPYWSGWS QTSDLK

4436	12487	A	5343	1	1075	MVDGTL L L L L L S E A L A L T Q T W A I G S H S L K Y F H T S V S R P G R G E P R F I S V G Y V D D T Q F V R F D N D A A S P R M V P R A P W M E Q E G S E Y W D R E T R S A R D T A Q I F R V N L R T L A R L / Y * Q S E R R P G S H T L A Q W M H G C E L G P D N A S F R G Y E Q F A Y D G K D Y L T L N E D L R S W T A V D T A A Q I S E Q K S N D A S E A D H Q R P Y L Q A T F V D S F P K * L Y E G K E T F L H L E P P K T H V L H H P I S D H E A T L R C W A L G F Y P A E I T L T W Q Q D G E G H T Q D T E L V E T R P A G D G T F Q K W A A V V V P S G E E Q R Y T C H V Q H E G L P E P V T L R W E A R F P S P P I / L P S W A S L L G L V L L G S V V S E A V V A A V I W R K K S S G H F L P T G G K G G S Y F K G
4437	12488	A	5344	58	426	K L Q L L * F F F W F F C L F T Y F L E T V E C S G A I A H C S L K L L G S S H P P A S A S L V A K I T G A C H P A W L I * V V L I V L F K R K W Q S H L K L M V E K R F L S E G Q I L S V Y H F R V P L L Q N D R N L A Q I I L G R K R E M Y
4438	12489	A	5345	3	284	K K I L R K K I L R K S S V * I * D * S S Q P E N I P * K Q F L S N H P K C T I T L S M R N M S I M K K G G R I S E D F I K L F F P S L L S H L L V I E W G L Y I E I Y L T P P N N T F
4439	12490	A	5346	2	225	T L P C T L S T S S T P W S A S S Q E R E M S F G D G * P V G * P P L T A V P C C S V W G L R R L * G E R T K L G I G A A G G F H S Y D G N T Q T
4440	12491	A	5347	3	104	W S T V A R S * L T A T S C S F C L S P P S S W D C R R V P P C L A / S F H F Q Y I A L N N * A * A I L P Q S K V L G L * A S A L Q V A G T A G V Y H H A W
4441	12492	A	5348	2	392	T G K N E I Y C I C F I D L E Y Q * K I G L L L H I G D K E E Y S / W N S G Y F I G Y C L E L P C P V V K V S G N * N D S I E A A V L M T T P S K I K I * V T L Q S K E A S P I K V L T Q V I G D I K G I L E N G H Y K Y Q L * Q F F K L Q K G N D N H
4442	12493	A	5349	2	67	A A E D * H C P I A S E T Y K T I T E L W V T L P V E G K S V P F L I N T E A T H S T L P S F Q G C V S L A S I T V V G I D G Q A S K P L K T P Q L W C Q L G Q H S F M H S F L V I R T F P A P L L G R D I L T N L S A S L T I P G L E P H L I A A F C S S K P P S H P L V S L H L K P Q V * D R L G N L Q D H H R C F G
4443	12494	A	535	750	1053	P S T L S S L I S R H D D E A T R T S T S E G L E E G E V E I G E T L L I V E S E D Q A S V D L S H D Q S G G I S L N S D E G D V S W M E E Q L S Y F C D K C Q K W I P A S K E L L K S F D L S I P V
4444	12495	A	5350	2	275	E T E S C S V A R L E C S G M I S A H C N L C L P D T G N S P A S A S * V A G I G A C H H A Q L I F V F L V E T E F H H V F H H V G Q A S L E F L / N L V I P P P R P P K A L G L Q G
4445	12496	A	5351	3	1031	S S A P E A A K K P T P C H R C R G L V D K F N Q G M V D T A K K N F G G G N T A W E E K T L S K Y E S S E I R L L E I L E G L C E S S D F E C N Q M L E A Q E E H L E A W W L Q L K S E Y P D L F E W F C V K T L K V C C V V P G T Y G P D C L A C Q G G S Q R P C S G N G H C S G D G S R Q G D G S C R C H M G Y Q G P L C I D C M D R L L Q L R S R N E T H S I C T A C D E S C K I T C F G P * P T G L R R S C E V G W V L D E G A C V D V E K C A A Q T P P C S A A Q F C K N A N G S Y T C E V E G D S S W V G C P G K G P G N C K Q C I S G Y A R E H G Q C A D V E R V P H * P E K I L C E E K T K T C Y N T P G S Y V C V C P D G F E E T / R R C L A A G R R L K P Q K G E S P T Q L P L P
4446	12497	A	5352	206	330	K M L Q L A L Q S C I K V R T L N S R H L G A G V T A H E E * C P C C H P M I K Q
4447	12498	A	5353	1	8271	
4448	12499	A	5354	2	10028	

4449	12500	A	5355	2	5217	APLDGEVELLQQKLREKLDEFNELAIQK ESADRQVLMQEEIEIKRLEEMNINIRKKV AQLQEEVEKQKNIVKGLEQDKEVLKKQ QMSSLLLASTLQSTLDAGRCPEPPSGSP EGPEIQLEVTRALLRRESEVLDLKEQLE KMKGDLESKNEEILHLNLKLDMONSQT AVSLRELEEEENTSLKVIYTRSSIEELKAT IENLQENQKRLQKEKAEEIEQLHEVIEKL QHELSTLMGPVVHEVSDSQAGSLQSELLC
4450	12501	B	5356	224	326	XSSSDGNLRPEAITAIVVFSLLAALLLAV GLALL*
4451	12502	A	5357	87	558	STFFPAIKHWVDLTAQRGHCLSPRSHSN EGRQMQRGPRWAGSPAPSPWSPGPG PRLHGRTERKERGLWGLDTRQKVGSA SRGVGPEPQHT*AAGTAKQRQHAASPP HGCPQPLTPPEPSEAGVSVAAYVYP ATRSPGQCWWLQQAFAFR
4452	12503	A	5358	3	713	TDRGCRGRDTFHEPELG/PKTPGPGAPLQ VPLAGDAVGGASARSPFLGAGNPPPIPW RTPVAGAASGAGPAAPAGPLGPSLG/RKY RPLLRMRIALFCLHPPAPAPMATCVHKP SLLSSRSSTS/SAALLLAVGAGTVGAE/RF GRSGRRRAPTPVARSSSPMQPRGPLR TPRRRCRAACPSRSPLLHLSPIAV*PWG KAVPSLGSQIHPVLNSREEGTSKTLPLRS REDGAIHFYIFI
4453	12504	A	5359	2	807	RPQGFPAWRLPSRRGATPGRLPRS*PRPH PRPEPGVRVGPWVIESVR/HQDCSGRSP GQTPCEDRAPSGKGSALGRSLGPWTL IGSGRG/RSPGKLGSPGPAKAF*RRR\RA SKVAPGPLDGWPRIAQAWAREKGHILA WGTGGSWPPSHAPGHQLGFQLKQPLGN QREWGQNLGIQDL*GQVDPNRPPLSGP GDRHLTGKPSGREGALSQGPQGRHSPGR PQQQASSCCERSHPGLPPVTTHCPGVQ WASCPGWGCLARCSRPA
4454	12505	A	536	426	634	VFCYSRTNWNKTEINRKKFGKLPISIWL SSTLLNNQ/LVSEENKREIKKYPDINENE DTTYQNLWNEKQC
4455	12506	A	5360	1	412	FFFFLRWSL/NSV/SQAGVQWWDLSLLQP LLPGFKQFSCLSLLSSWDYGCPPRANFL HF**RQGFTMLFRLVSN*PHDSPISASQS AGVIGVSHRARPSCLLAYFSEFVSKWK QSSTKALPCGFRMLCPVLTPEK
4456	12507	A	5361	3	884	YLSIHQVYGKEACIPCGPGSKNNQDHSV CYSDCFFYHEKENQSLHYDFSNSLVGS LMNGPSFTSKGTKYFHFFNISLCGHEGK KMALCTNNITDFNVKEIVAGSDDYTNL VGAFVCQSTIIPSES/TGVSEQPYHNPIL ADTFIGVTVETTLKNINIKEDMFPVPTSQI PDVHFFYKSSTATTSINGRSTAVKMRC NPTKSGAGVISVPIKCPAGTCDGCTFYFL WESAEACPLCTEHDFHEIEGACKRGFQE TLYVWNEPKWCIKGISLPEKKLATCETV DFWLKVGAGV

4457	12508	A	5362	3	2697	<p> CSVKECLQASAKLPSAPASVSLCLLVA KVWRRLRWQEAASFSCASGEYLEMKNQ VCSKCGEGTYSLSGSIKFDEWDELPAGF SNIATFMDTVVGPDSRDPDGCNNSSWIP RGNYESNRDDCTVSLIYAVHLKKSgyv FFEYQYVDNNIFFEQQNDQCQEMDTT DKWVKLTDNGEWGSHSVMLKSGTNILY WRTTGILMGSKAVKPVLVKNITIEGVAY TSECFPCPKPGTFSNKPFSNCQSKIIDPF LKRFFYVAEEGSSECTERPPCTTKDYFOI HTPCDEEGKTQIMYK WIEPKICREDLTD AIRLPPSGEKKDCPPCNP GFYNNGSSSCH PCPPGTFS DGTKECRPCPAGTEPALGFEY KWWNVLPGNMKTSCFNVGNSKCDGMN GWEVAGDHIQSGAGGSDNDYLILNLHIP GFKPPTSMTGATGSELGRITFVFETLCSA DCVLYFMVDINRKSTNVVESWGGTKEK QAYTHIIFKNATFTFTWAFPEN*FRVQD NRRFINDMVKIYSITATNAVDGVASSCR ACALGSEQSGSSCVPCPPGHYIEKETNQC KECPPDTYLSIHQVYGKEACIPCGPGSKN NQGK KMALCTNNITDFTVKEIVAGSDDY TNLVGAFCQSTIIPSESKGFRAALSSQSI ILADTFIGVTVETTLKNINIKEDMFPVPTS QIPDVHFFYKTIYRQIIDIKCPAGTCDGCT FYFLWESAEACPLCTEHDFHEIEGACKR GFQETLYVWNEPKWCIKGISLPEKKLAT CETVDFWLKVGAGVGAFTAVLLVALTC YFWKKNQKLEYKYSKLVMTTNSKECEL PAADSCAIMEGEDNEEEVVYSNKQSLLG KLKSLATKTAIGVFGGPWSLGYVISCQY SETRSSCHSVHAKNEILAIEE </p>
4458	12509	A	5363	1	1146	<p> NFDSKRRTVRNLRREDIAKYLRNLDPN SAHYDPKTRAMRENPYANAGKNPDEVS YAGDNFVRYTGD TISMAQTQLSVSSMS SHFISAHKTFGIV*SLFSRSIQ*CSCQLTK MFRITLVFAWEAYDKGSEVHLAQADPT KLELLYKSFKVKKEDFKEQQKESILEK YGGQEHLDAPPAELLLAQTEDYVEYSR HGTVIKGQERAVACSKYEEDVKIHNHTH IWGSYWKEGRRGNKCHSFFKYSYCTG EAGKEIVNSEECIINEITGEESVKKPQTLN ELHQEKLKEEKKKKKKKKKKHRKSSSD SDDEKMGHVKSNAKALNA*EARLLHVKE TMQNDERKRPYNMY*TSRPIEEME YRMKIRQRPDDPMASFLGQ </p>
4459	12510	A	5364	3	1589	<p> APALKVILRYT*TDAPAIWWLDPELTYG CAKPFVFTQGHSCNRSFFPCFDTPAAK CTYSAVVKAPSGVQELMSATRSAYMEE EGVFHFHMEHPVPAYLVALVAGDLKPG DIGPTSRVWAEPCLLPATSKLSGAVEQ WLSAAERLYGPYMWGRYDIVLPPSPFI VAMENPCLTFIISSEDEFVIDVIHEVA HSWFGNAVNTATWEEMWLSEGLATYA QRRITTETYGAFTCLETAFRLDALHRQ MKLLGEDSPVSKLQVKLEPGVNPShLRN LFTYEKG YCFVYLSQLCGDPQRFD DFL RAYVGEYKFTSVVAQDLLDSFLSFFPEL KEQSVDCRAGLEFERWLNATGPPLAEPD LSQSSSLTRPVEGLFQLWTAEPDQAAA SASAIDISKWRTFQTALFLDRLLDGSPLP QEVVMSLSKCYSSLLDSMNAEIRIRWLQ IVVRNDYYSLT/FHRVRRFPGRARCHAC YTIPLYEDLCTGALKSFALEVfyQTQGR HPNLRRAIQILSQGLGFQHRARP </p>

4460	12511	A	5365	1	418	FMGGVNRADENIDKYRASIRGKKWYSS PLLFCFELVLQNAWQLHKTYDEKPVDFL EFRRRVVCHYLETHGHPPEPGQKGRPQK RNIDSRYEGP*IQVDSNPQGAQTRCAEC HKNTTFARCEKCDVALHVKCS\VEYHTE
4461	12512	A	5366	1	205	KKFSCGLKKIFHEKNCQST*QISLLSYFK KLQPPQLSSTTL/SQQPSTLRQNPPPAK RL*LEGSADG
4462	12513	A	5367	1	389	CRFNAISSKITADFTVFGGFLLEVHKVIL KCKWKYYYKSRIVKTGFKKTQLS/GLILH NNKT*YTSIIKTELTKYRHARMENPEIDL HRFDQMIFDEGIKVIQ*GKERLFNQWCW SRLRCICLKFSITNGQ
4463	12514	A	5368	2	300	TFFNLMTNMNLQIQEAQ*IPSWKNSE/RS Q/SRHLIKLLKIKGKERILKAEQKLITYKG CSIRLRGDFSPETTEARK*WDDIFKVLKE QVSTKNLIFSKTVL
4464	12515	A	5369	199	494	
4465	12516	A	537	1190	2097	SSCLKILNITLAKSLLL/CLDISVCYLLD TGICYCLLDISVCYCLLDISICYCLLDTSV CYCLLDISVCYCLLNISICYLLDTGICYC LLDISVCYCLLDISVCYCLLDISVCYCLL DISVCYLLDISVCYCLLDISVCCCLDIS VCYCLLDISVCYLLDISICYCLLDISVCY CLLDISVCYCLLDISICYCLLDISVCYCLL DISVCNCLLDISFCYLLDISVCYCLLDIS VCYCLLGISVCYLLDISVCYCLLDISVC YCLLDISVCYLLDNSVCYCLLDISICCC LLDISH
4466	12517	A	5370	256	514	
4467	12518	A	5371	2	1340	SLDLGGISTVVVNGYDVVKECLVHQSEI FADRPCLPLFMKMTKMGGLLKSRYGR GWVDHRR LAVNSFRYFGYGQKS FESKIL /EKETKFFNGCYWKHTKVGPFDF*TV**R MLFSNITNLHFWEERFHFMOGHRFFRH MDWSYFRWKMW N* AASASVFLYNAPF W/ITWA/FLPFGKHQQLFRK/WTAVVYDFL SRLIEKASVNRKPQLPQHFDAYLDEMD QGKNDPSSTFSKENLIFSVGELIAGTETT TNVLRWAILFMAALYPNIQGGVQKEIDLI MGPNGKPSLGR/RNAKCPYTEAVLHEVL RF/GNIVPLGIFHATSEDA SLRGYSIPKGT TMITKP*FLYHLGWKKVPGEDPQKVFP ERFPGTSSGIFWPQEGKLWVPFFPLGRRH CPWENTLARMEMVLFFSSIASEVSFAFS HMN*FQI*SPRLGMTLQPQPYLICAERR
4468	12519	A	5372	135	273	
4469	12520	A	5373	1	344	LNTLPEVPFTPLSCLPSLSLSS*LAPSPFICI CYAIVP/PPFLLPSDLADPSSHPGLPFLFP PHSPRHAPSAPPSKKKKKKKKKKKTTA PVQASLGTSSLYPLGGSETGPTWS
4470	12521	A	5374	1	724	GRRGRGRAGSRAGRRGGAQAAALVNR GGGPIRNYSDVAGGAAGGGRNRNRPAP YSRPKQLPDKWQHDLFDSGFGGG/AAG VETGGKLLVSNLDFGVSADADIQELFAE FGER*RRAAVHYDRSGRSLGTADVHFER KADALKAMKQYNGVPLDGRPMNIQL VTSQIDAQRRPAQSVNRGGMTRNRGA GGFAGGWVDGTRKGTARGGARGRGRGA GRNSKQQLSAEELDAQLDAYNARMDTS
4471	12522	A	5375	37	331	GLLCQASGPQAPGWPA GLRRRGQGS LPVPPRPVPA*/APGHTCHAL/GKIPF*VPL PLQ*GPPETHLREPPPGPCPPS/PVPSPYQ GFLQPGGRAGGDRD

4472	12523	A	5376	1	385	FFFFFFFETETCSVA*AGVQWRDL* LQPPPPGFKRFLCLSRPSSWDYRCTSPYLAH F*FLVETGFHHVGGAGLELLTSSDPPISA SQSAGITGVSHCTWPKLTTSTLMNVFPL NIILLYLVILAK
4473	12524	A	5377	21	352	PTHPWPPTVLEATAPGSEYFF*DAVLLS SRRLECSG/SISAHCDLHLPSSSDSPSSVP QVAWIIGVRHHVQLIFVFLVEMGFRHVD QAGLK/IA*PQVIHPPRPHKVLGLQV
4474	12525	A	5378	2	545	TCLGFFQMFFLGSLIFVCYILLKFDVCVFIF SSNLGSLIFVCYILLKFDVCVFIFSSQLPFFT FYMDYSNPLGLSMSSLRIS*KTF*MYG*V LYFAFF*KRNSQCFPPFNRDYFWVCSSSV DLFCTLFFTSCPHQQPSCSPPPGNGKPA PLPTVTLEALKMMMVFIFGLSSRIRGRS WKSP
4475	12526	A	5379	545	1462	GYFPCFIPVATS*QSIGVNF*LFEYFVY IYIFEGFWGGLICKVSSVCLFQVYFSFA KIEPPGFKTTLPPSTLVNNWELTSLHQP K/RPANFVIFGKRQGFHVGPGLNSGPHA IRPASASQSTGITGVSHCACALNFITEP
4476	12527	A	538	163	372	IRQRKAKLVVLA FNRRGLRKP/IFYAG VGKIVKKKYSGFFIELVTTGKNYLMCA LAVIDPRDSNIIRS
4477	12528	A	5380	2	243	GFKQFSCLSHPSSWDYRCAPPHPTNF*F LVEPGFHHVGGAGLELPTSGDLPALASQ SAGITGVSHHPWPMASALNSKNVR
4478	12529	A	5381	1	328	SPETGSCSGAQAGVQWHDLGSLQP*LGL K*SSYLSLLSNWDYRCA/PPRLANFLFFV QAGSCHLAQAGLELLSSCHLPALVSQNA GITGVSHHARAGSCMEENTSLWTL
4479	12530	A	5382	2568	3052	RGTEGRRVKSSKAGFFCFVLCFVLRWS LTLLAQAGVQRHDLSSLQPPPTFK*FSC LSLPSSWDYRRPPPRSG*F/SFVFLVETGF HQVGQAGLELLTSGDPPASASQAGITG VSHHAQPQLDLEPPVCGQRDMALLLE RLPETVTCFLFPSELRRAR
4480	12531	A	5383	2	306	FFEMESCSAAQAGVQWHNPSSLQPPPLPG FKQFSCLSLPSSWDYRRAPHPANFEFL VDARFYHVGQAGLELLTSSDLLASAS*S AGITGMSHHGWP*ATF
4481	12532	A	5384	141	414	IRITEGGAQASVVFKTQV/WLGTVAHTC SPSTLRSRGGWIT*VQEFKTSQSNRNQRG CNLVWSLKLTSILLTFELDSIRQEEGKLV RRWGR
4482	12533	A	5385	2	287	GRVGNKKFGGRISLC/QPGWSAVTQLQ LIVTLNSWAERFSQLDLPSS*DYRCTCLA NFLTFCKDECLAMLLRLVLNSWPQGIPL PQLLKVLELQV
4483	12534	A	5386	663	1014	ILKHYPQSIISSILQRKHTRQLSASLITNAK VFFQASRFNVSSHILALLQENIFYFNTKP VICKPG/CVIRITF*KL*IASQVRWLTPVIP ALWEAEAGRSRGQGIKTILANTVKPRLY
4484	12535	A	5387	3	208	EDVNRWRDIPSPWIGRVRIRMSVL/PNP INNTYINTEFLILI*Y*YRNTSIPIKISGRFF VLLRENEN
4485	12536	A	5388	190	261	ISIF/CFFKTDSSCVAQAGVQ**NLGSLQ/P CNLQPLPPGFK*FSCLSLLSNWDYRCAPP /HPNFCIFSRDGISP*LSILPTTPIKIVARKI LI

4486	12537	A	5389	31	1431	RETRSCWAHYHAESSKHQKAKLKDSRK ARRSIELIGPGSSQKGGDICSILHSSKLGI LCYSKTGNMGGWEGGMQLRVSSNSM GKSSRERAAADLPQGSCWHELPGRLINT RISLKPRHVWNLSSVLCQVVKVKVSMQ MFHMPITSAMQGDRLGICVTQFDPKLE RGLVCAPESLHTVHAALISVEKIPYFRGP LQTKAKFHITVGHETVMGRLMFFSPAPD NFDQEPILDSFNFSQEYLFQEQYLSKDLT PAVTDNDEADKKAGQATEGHCPRQOW ALVEFEKPV/YLPSAVPGDWLQARCGHS PNTCRLAFHGQSCSTG*RTGT/NADSFLP RLKVYKLKHKHGLVERAMDDYSVIGRS LFKKETNIQLFVGLKVHLSTGELGIIDSAF GQSGKFKIHIPGGLSPESKKDPDTPPSKT GPGWPVGGQPGRRRSPSGANPHKMGW LTRPFKRYVFDTHKRMVQSP
4487	12538	A	539	995	1192	IILGNLTACSFYTSSLNAVWLIKSAAMLQL YFIFFFGDRPSLCHPGWSAVVQSLLTAT STSWAQAE
4488	12539	A	5390	1	421	FFFW*GTESQLLPQCSGAITAHCSL*LPG SSEPPTSAS*VPETIGTY/RHAWLFFFFNL FFVETGSHYVAQAGFEPLGSNDPPQPP KLLGITGMRHHSRPELLPLTVPMWESQ DGETEDFCAMETWKVNITCLAQTPRL
4489	12540	A	5391	1105	1497	LFRTSLLVIAFLPKKNFF*HYA*SYNVH PNTARKIKPEFRAVRVSFLLSERMSNIFF FFDTEFHS\VTRELECTG/T*STHCDPLRP GFEQILPASASQSSWDSPACATHARLIFV FLVETGFLHVGQAG
4490	12541	A	5392	109	695	LLLIPSAVTSYPPKDLPWGGMILSKPPLL GSMLANNCIVAGGCS*SSTLPS*LSSWRV GPQHLPRHARPPHQVQYIISQDGVQHL LPQEYVVVPEGHHIQGQKGRITHIQYEQ GAPFLQESQIQYVPVSPGQOLVTOAQLE AAAHSAVTAVADAAMAQAPGPVWLQD EDKCPKHNSNKLQHPRASKYDVITPGR
4491	12542	A	5393	1	405	
4492	12543	A	5394	203	458	
4493	12544	A	5395	2	1185	LILNKKSRTRRSFFRRHGSPSHGPFAPWRP SRLAEPGELG*REREGYNNPISGENLIG LSRARRPHNAIFVNFEDDEEVKQPLEAA AQ/TWRRVCTNPVDRKVEEELRKASPA LRLAPLFDIRPIWSRNAVKANITVHPNRF KAWLPFIAYYMITGPWRSWIRFGYDP RKNPDAKDL/YQVLDFRIRCGMKQGYA PSDLPVKAKRSTYNYSLPITVKKTS\SQL VTMHDLEAWPWPRGRSGARKPASSKY KLKVSQTLRDSVYIFREGALPPYRQM FYQLCDLNVAEELQKIHNRNDGAEDFLA QERGWGGCLPQGPDEF/RGDTMSPMIR ETIGSKRPALFSSSAKADGGKEQLTYES GEDEEDEVEEEEEEDFKPSDGSSENMEN NQNF
4494	12545	C	5396	95	295	MSTIKAPXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXLSSLRILFQNIYLYWDKIT FLYCEHTVGAQ*
4495	12546	C	5397	262	390	
4496	12547	C	5398	118	132	
4497	12548	A	5399	109	559	QFLHRLVHDSGEVWMKLVE**NTLLAK MVSISWPRDLPASASQAGITGLIGALVL SVGIAEVER/HEI*NP*KCLPGSSHHPHP PGRRHVHGLLHWCAGVPP*QPGKH
4498	12549	A	540	77	199	SKSRPIASNKIEAIKSLPAKKPGPDGFAT EFYQTFKEEL

4499	12550	A	5400	1	362	FFFFLRRSL/SSVPQAGVQ*HDLSSLQPP/ PPGFTPFSCSLPSSWDYRCPPPRPAKFFL YF**RRGFTMLARMVISI*PRDPPASASQ SAGITGVSHRARPPPPQFFIQLPLYNIHTL EGR
4500	12551	A	5401	2	462	NPPTSAS*VAGTTGACYHTRLILVCRDR VSPCCP/VLVFFFF*DRVAQAGVQWHG LGSTCQPSCPPGFKRFLPSDSPALSPSS WEYRHPPPRP^ANFFCIVETGFTVLAR MVISI*PRHLPALASQSAGITGLSHCARP VDSFLATSIY
4501	12552	A	5402	3	352	SSRPGSCRRGAVRAAIRYVRLRAVPSGG GEPPSGAPLQPSWK*AFARPGMLRCSMP SQAPSRSAAVLFEPLAEWMLHCA*QDEV RLGGH*GRRGPLLLDRSRA*RESPAEVRP ARE
4502	12553	A	5403	3	286	SVAQVGMHGHSLSLQPLPPGLK*SSHL NLPSSWDYRHAPPHLANFCIFFVETGFR HAISQAGLKSLSNNWPTLASQSVVITGV SHRAQPC*TF
4503	12554	A	5404	73	542	VLIFFFFLKLSD/DSVA*AGVQWCNLSL QPPSPGFK*FSCSLSSWDYRCVPPSPA NFFIFLVETGFTVLARMVISI*PHDPPTL ASQSVGITGMSHCPWTDLIF**CKRDTLC IPSMSLS**FKVPKGNLIWKLKGFGGLP LGIONAYFWIV
4504	12555	A	5405	1	397	EMESSSVTQA*VQWHDLALLQPPPPRFN RFSCSLSSWDYRCPPSPANFCIFSRD/ MGFIVLARLVLS*PNDLPASASQSAGIT SVTHRIWSKIFRVDNDHYILFSSMELN VPTIVLCYHPQSSNMYS
4505	12556	A	5406	72	243	EPMTQPQVSMFSLRQPMKTTGMRIAMQE KVTQNTQPS*KJFRFPSYLIGVSLVISI
4506	12557	A	5407	34	420	MLYSHDPELS*QRVLTALYAVFPFPVPV DFL*I*FPSALVSIGGSRL/PVLSHWFLDL RVFHF*FEKAHL*KLCGNP/WLSALLSTF KVM*ERLVDQ*LSMAKTTE*EPMTQPVS MFSCGRVEEFRHHP
4507	12558	A	5408	3	316	FFNFNSRQGLCHPSWSAVTQSRLTVASIF RIVQGSSHLSLGSW/DARHVPPCLANF* FFCRD/RGLVMLPMSVSNWAQAILPPW LPSIGITGVSHHVWLASLFVF
4508	12559	A	5409	905	1291	RGADTCLGFQVSADLHHLFSFLFCSVAQ AGVQWRNLGSLQPPPGFKLFSCSLSS WDYRHAPP/RPG*FFVFLVETGFTRVGQ AGL*LLTSGDPPASASQTA/RGL*GMSH LASPIYLDYFK*NFNKP
4509	12560	A	541	212	322	
4510	12561	A	5410	2	308	FLRHNLAVTQPGAQWRLLSSLQPLPPEL KPSSHFSLPSSWEYRCEPPHPANF*FLVE TGFHHVAQAGLEFLASSDPPTS AFLNAG VTGVNHS AWLCFSYLL
4511	12562	A	5411	3	368	HRGESVWNICRWGTLR*GKIGKMTTRAH CLEFIGALIVFSITSPAPFEAPKWKNDDL *TLTHGRPVS VLLAKKCDHG/KDECRN SSLKMGQIYMEHSFVG*IETSAKENVNF DEASRCLDAK
4512	12563	A	5412	73	380	GQALQWCVSVMCSCHSHPCV*VLWV CVCLCISMCMYSYACVLGYTKFGVCTE KNKQONCTGNRSTQGLPLRNRHTGSFRF WLDHFPLASPKGTLRSLSP
4513	12564	A	5413	1	400	NSEGAAWIQPPAGEPTWGQSGGTQRAQ AMPPGDYS*SQGHPFLH/RAPPLTRNR RIFLRRAPSPVLEDPRKPPSRGQRL*DA LHHVLVAQLREGMLGQPRPHPPKPIK *SQHA*QLPAGEPEVGPAGADR

4514	12565	A	5414	1	895	LRRARPRGWAGREAGPHPH*LRCRSSA ALRPAFPTRPGETGLDRTEGRDQTSV NSAT/RLPNTPSRSAGSSSLQTRGLPGS SPQQENRPGDKAEAPKGQE/RMPPGDYF VIPRTPLSPAPPPLTRNRRIFLRRAPSPV LERPPEASKQRTATPLRRTAPCASGAAQ RGDVSGRKGVCCKAGEQG*PPNNPRLRR SQAHARKRRRGDKFGVRPLQYCAF*DF WRRLSWQNPFPKATLPLLR*PLPPPLQA GTAPSPSSSQAN*MITARVTVTGWRAG SGTGSKGP*EPGRASFPS
4515	12566	A	5415	20	481	PTDRPGEHSKTPSLQKCKK*KLACSGT CL*S*ILGRLRQKDHLSFGVRGYNEL*SC HCTPSWVAE*GPVSK*IIQSPPRKE*S/LY NEKNPSN*HIVDSGEWFSFVFLGADRWG AGVLYQVRALSQMCNERGHKHCIPITI YLPYKPLCLPAL
4516	12567	A	5416	236	820	RRPQQAGKMKGSRIELGDVTPHNLFNCL ILCGVTSPNIKQLKRLNQVIFVSYNDKF YKDVLEVGETLKLAYFNDAVGA VCCR VDHSQNQKRLYIMDTRDVWAPYRSLGI RELKC*IMCLKHLLKMKVLFDNIFLHVQI SNESAIDFYRKFGFEIAPKKNYYKRIEPA DAHVLQKNLKVPSGQNAVQKTDN
4517	12568	A	5417	15	209	KASRKMQIETTLRYLSPMRLAKMQML INTSCW/RKSQETR TLIC*W*EGKMVQPL SKGIWPYLIQ
4518	12569	A	5418	1	498	VQRTROLVTSPSPMSSSD/EQSSSPQCTV PSKLLVDPLQHEFSKCGENDNIPATPSNS NTPLKHSASFISATGTTEESRSPVQIKNGS VVSLSQSPGSRSSSAGGTS AVEVKVEPETS SDEHPVQCQENSDEAKAPQTPSALLGQK SNTD GALQKPSNEGVIKATK
4519	12570	A	5419	8	299	
4520	12571	A	542	1	518	MAVARLA AVAAWVPCRSWGWA AVPF GPHRGLSVLLARIPQRAPRWLPDLNLA YKKLKGKSPGIIFIPGYLSYMN GKALAI EEFCKSLGHACIRFDYSGVGSSDGNSEES TLGKWRK\NVLSIIDDLDVGPQILVGSSL GGWMLMLHAAIARPEKVVALIGVATRCR YLSDKV
4521	12572	A	5420	1	3788	MMRLEGAEPGSQLQNIDEEVISSACRLV CEWAQKVLSPQFDTVLELARFLVKSHYI GTKSMAALTVM AAPAGMKGITQPSAF IPTAESNSFQPQVKTLSPIDAKQQLQRKI QKKQEQKLQSPLPGESA AKKSESATSN GVTNLPNGNPSILSPQIGIVAAVPSPI VQRTROLVTSPSPMS/CF*ROSSSPQCTG GHSAAVAVCETGTDSPERSQSWSWGSF CPAPLPSDLTQTSEHQCTPIRSPTTVL
4522	12573	A	5421	288	668	VEKRQFLNSTADPECIRYPLTYFVLGQSL ALVTKAGVQWRNLSSLQPPPEFKRFSC LSLLSSWDERHAPPCPS*F/CVFFLVKTG FHRVSQDGLDLLTSNDPPTSASQSAGITG VTLAPSLFVLH
4523	12574	A	5422	3	288	STFFFFFK*NLARLSRLECHGTISAHCNFR LLGSSDSPALASQVA\GLRGTCHT*LI VPTVETGFRHVGQAGLELLA\WVICPP*P PKVLR LQA
4524	12575	A	5423	1	781	MVHITGLCADNLQYQAGARIISVPEEDN SKSLENIFGGIIEENFSLARDLDIQEAO GTPGKCITKRSSPRHIVIRLFVKTKERIL RAVRQKHQV TYRGKPIRLTADFSEETLR ARRDWGHIFSFLKQNDYQPRILYAAKLS IIEYEGKIQSYSDK\QMLREFTITNGKLLKG AVSLVVALNR*NKSWKH KTHQNRTSLK HKSHRTYKTKIPLHDEYNDLRSALRPAS HTAYGSMMLMKSSLT LFKHGDEVVGRRAK

4525	12576	A	5424	2	392	KTKIIQMANKHRKRHQSQ**VRLMQKKI IMIHYPQWLKTSKSDMIKCCSGYGTTE IFTHYLWECKLLHLLWRMVWLILKFK TDTPHDPAIPLLGTPAECTCTPKAHT AALSIIVPSWEQPKYPQ
4526	12577	A	5425	1	181	
4527	12578	A	5426	1	2162	MALFVRLALALALALGPAATLAGPAKS PYQLVLQHSRLRGRQHGPVCAVQKVI GTNRKYFTNCKQWYQRKICGKSTALGT ADVKGVSLLAVSVSDLGGEQMRKLRPR EMMKLAEDGPAALPLSNLYETLGVVGS TTTQLYTDRTEKLRPEME/GGPGSFTIFA PSNEA\WAPLPAEVAGTPLVSNVNIELL NALRYHMGVRRVLTDELKHGMTLTSM YQNSNIQIHYPN\GIVTVNCARLLKADH HATNGVVHLIDKVISITITNNIQQIEIEDTF ETLRLAIVAASGLNTMLENGQYTLAP TNEAFEKIPSETLNRILGDPEALRDLLNN HIL/RSQAMCAESIVAGLSVETLEGTTLE VGCSGDMLTNGKAIISNKDILATNGVVIH YIDELLIPD\SAKTLFELAAESDVSTANDL FRQAGLGNHLSGSERLTLGVLNSVF KDGNPPI\DALTRDLLWNHINKDQLASK YLHYGQTLETLGKKLRVVFYRNSLCIE NSCIAAHDKRGYGTFTMDRVL\TPP MGTVM\MDVLKGDNRFSMLVAAIQSAGLT VETLNREGVYTVFAPTNEAFRALPPRERS RLLGDAKELANILKYHIG\EILVSGGIGA LVRKSLQGDKL\SSA*KTNVSVNKE PVAEPDIMATNGVVHVITNVLQPPAN RPQ\ERGIDLADFA\EIFKQAFSVFPGAS QRSVRLAPVYQKYL\ERMKHS
4528	12579	A	5427	1	410	FFFLKRRDLAVAQTGVQWGDHGSLLQPQ IPGRRQSSDLSFLNS*DHRHILSCSATFTS F*RSLSAAQAGLEILATSNPPA*ASQGPPI *GVSHHTWQKATFCICLPANNILSCLNIY SFFYHKTNNHFMKTNHKKQI
4529	12580	A	5428	3	404	RLFYNTIEMRSLFVQGC/INSLG*SDL LVFASASAGITGVSYPHALASIVFVCVC V*WGSALVAQAGVQ*RNLSLQPLPPEF KQFSFLSLPSSWIYRHPPLSFYLPKLKS CGLCTGIWAWRLFIFIGS
4530	12581	A	5429	2	240	TRSAVV*SQLTAALTSLVKQLSQLSLPR SWDYTHVPPCLSFYFL*R*GLPMLPGLV SNSWTQAIFLPQPPKVLGLQA
4531	12582	A	543	3	604	VMSWAFTFIHSLTDSPRATSSPPSPIHE GDQDIIVLFLKVLGGKNSGAWGRNGR PQGRRRGAR\FLRLNVGGCIYTARRESLC RFKDSMLASMFSGRFPLKTDESGACVID RDGRLFKYLLDYLHGEVQIPTDEQTRIAL QEEADYFGIPYPYSLSDHLANEMETY/CF KALTDFCDSYGLVCNKPTVWVLHYLNT SGAS
4532	12583	A	5430	3	468	RWSFTLVAQAGVQRVILAHQPPPPGFK RFSCSLSPSS/WDYRLAPRLANF*FLVE TGFLHVGQAGLELPTSGDPPASASQSARI IGVPLCPGISRIFVQQMALED\RD\SLRL WFLSRHANLQCVTL\SWACQLLPCGTWR ARETKANTLPAVP
4533	12584	B	5431	151	344	YENESALNLYETCKVRTVKAGTLEKLVE HLVPAFQGS\SLSYVTIFLCTYRAFTTTQQ VLDLLFKS*
4534	12585	A	5432	1	439	PSASSGQAGGFWSQSLFKQESSGFVRTS AESVLRQESLRGVLGVLELYWRGSEVC GSRQSLYGLSSGRGILQGPQEH*SP\CP SPPELKIPENANVFYAMNSTANYDFVLK KRITFKGVKVKHGASFTLPRMKQKGLK IAKGIF

4535	12586	A	5433	77	444	GLGVPSELQEIRVLPLTVCPSSVPPQYEN ESALNLYETCKVRTVKAGTLEKLVEHLV PAFQGS DLSYVTIFLCTYRAFSASQQVLD LLFKR*A*ALHCTGCTRGPRPHPLAAG LGNAESPL
4536	12587	A	5434	1	3190	MVQRMWAEAAAGPAGGAEPFPGSRRSR SVWDAVRLEVGVPDSCPVVLSFTQLDP DLPRPEVGGGRGLLQKSASRVGSGGCRR APSNRSDHGWGFAPLNTVPGPAVTKAA AAQVDLFLRHCPCLHRWPVPYFTQFP ARSASLAFTMQAVGLCSRQSVPYLGNRL HRCIPCTVARQALDVPAPGCRALSSQSST QEIGEELINGVIYSISLRKVQLHPAGNKG QRWLGYESALNLYETCKVRTVKAGT LEK
4537	12588	A	5435	1	435	EKINKIRWLPQQNAAHFLLGTNDKAIKL WKISERDKKAEGYNLKDDEGRRLDPFRI TALRVPIPKPMDLMVEASPRRIFANAHT YHINSISVNSDHETPNIVDIKPANMEELT EVITAAEFHPHCNVFVYSSSKGTIRLCD MR
4538	12589	A	5436	204	397	VPILKPMGSYG*EASPRRIFANAHTYHI NSISVNSDHETYSADDLRINLWHLEIT DRSFNIV
4539	12590	A	5437	1	1463	PLRSWLPRLPDSQADIISTVEFNYSGLL AT/GDKGGRVVIFQREQEVLAPRRPAL P*SVSSFLSTSCREVWQGCESLPRERIK /GRPHSRGEYNVYS/TAQSHGTGGFDYL KSLEIEEKINKIRWLPQQNAAHFLLSTND KTIKLWKISERDKRAEGYNLKDDEGRRL DPFRITALRVPIPKPMDLMVEASPRRIFA NAHTYHINSISVNSDHETYSAR*PGGIN LWHLGNHR*EAFNIVDIKPANMEELTE VITAAEFHPHCNVFVYSSSKGTIRLCD MRVSSALCDRHS/KSFEEPEDPK/SSRSFF SVEIISISDVKFSSHSGRYMMTRGLPVR WKVWGPSTWEEAGPVGGPTRVHEYLAR TKL\CSL\YENDCIFDKFECCWNG\SDSA IMTGSYNFFRMFDRDTRRDVTLAEASR ESSKPRASLKPRKVCTGGKRRKDEISVD SLDFNKKILHTAWHPVGQCYPWLATN WLYIFQDKIN
4540	12591	A	5438	3	392	FCACFIGSKTPASCRAQGRPGFSPGSP SGPAGGKGVLEKEPSEM/PP/PEAGERK LERKTVPGRGAEYGPPLRLSYPAVNS HPLPSSVNGGDSNNSSQLPESHCPPFSP KEGPRKGEVPLHATRA
4541	12592	A	5439	1	297	SLLGPPEPTTWT/PAPQDR*HGPC*GR*R KRRPSL*T*QWELASPP/REPMFVPKKEM VAIQPLQEEASVGPTPELLSGSCRSPISGI SILGNCPSLAPLT
4542	12593	A	544	3	533	AEGDQDIIVLKFLKVLGGKNSGAWGRN GRPQGRRGARFLRLNVGGCIYTARRE SLCRFKDYNVASMFSGRFPLQTDESAC VIDRDGRLFKYLLHYPSWRSSEFPQMRD TRGRPTGKRADYFGIPYPYSLSDHLANE METYSLRSNIELKKALDFCDSYGLVCN KPTVWVLHYP
4543	12594	A	5440	3	11	HELILSPGPTQGQTPDEAGVIIRVLKNVP DLAILNSKDALDPRQPGYQPPNHPGPSS PPAAPRPRGA*GNPQLENASRSDRNPSQ GLRTRIRRPETPDCGPPSPAGSSPAPPPS DVPPAFHSSGPPEPTTWT/PAPQDR*HGP *GDKRGAPGVAGEDPDQP*GTS

4544	12595	A	5443	1	702	MVAASAAIKFKTNMSLAIAIAGEHVEFA LIPVTAVKYTYTVIPALVMTWCLSYIER WVDSITPAVTKNFLKPMILVLAAPLAIL LIGPIGIWIGSAISALVYTIHGYLGWLSVA IMGALWPLLVMTGMHRVFTPTIIQTIAET GKEGMVMPSEIGANLSLGSSSLAVAWK TKNPELHLDTPHTESPTPHDSNSHRP/PT AGVYNRSKAKSTDKDNDQTRWGNWR WSQRKYCLPL
4545	12596	A	5444	195	524	RALTTPRHLPCTSQVASCNLCCLFLADLD TLAHTESPTPHDSNSHRP/PTAGVYNRSK AKSTDKDNDQTRWGNWRWSQRKYCLP LIVLSFFQTKQNTGTGFRNFLSPFLMYV
4546	12597	A	5445	2	884	VPQFKPKLHQENGPGRLARCDHQGAQP TRETWLQDRDREFQSQTKFLLSRV*LV LQLESQHSLERLREGQRLVEREQARMR AQQSLLGHWKHGRQSLPAVLLPGGPE VMELNRSESLCHENSFFINEALVQMSFN TFTKLNPSVIHQDATYPTTQSHSDLVRTS EHQVDLKVDPS\QPSNVSHKLWTAAGSG HQLPFHESKSDCKNDLDTSHTESPTPH DSNSHRP/PTAGVYNRSKAKSTDKDNDQ TRWGNWRWSQRKYCLPLIVLSFFQTKQ NTGTGFRNFLSPFLMYV
4547	12598	A	5446	269	483	
4548	12599	C	5447	5465	5719	MRLGKTHSTAGAWKMGLLRQADSTRG EKRGGKKAIIICVKSPPGYQVAVWKY HSSLGVFEFKKTCVSMGRHDTEKKMS WERP*
4549	12600	A	5448	57	102	
4550	12601	A	5449	3	287	RALYYFL*FALFGLT*M*LVS*KLQIEYE KKQTLGQNDTGFCIDGTANTFRVMFKEP IEILPNVCYTACATLKVRVMHYVPDGL LNVAECVF
4551	12602	A	545	1492	1672	KQWHESHDPDYDRSPSQTGEGDEPCSWH RLFAQGDK*YEATACHRNLDWQKATDI SCNTNG
4552	12603	A	5450	1	594	
4553	12604	A	5451	1	768	SVEFPCRLSGAVVRWAEACQRQQLPV TFGNKQKVLGKALSLIRFPLMTIEFAAG PAQSGILSDREVNLFLHFTVNPKRVEY IDRPRCCLRGKECCINRFQQVESRWSYS GTSDRIRFTANRRTSIVGLGLYGSVHGP TDYQVNIQIEYEKKQTLG\QNDTGFS GTANTFRVMFKEPIEILPNVCYTACATL KGPDSHYGHKRI*RKVVHGGHLLASKD CFFLF*/ALGINNGTSIEDGOIPEIFYT
4554	12605	A	546	138	257	IFLLYLKKNKVQNK*EIKQHFLGKIMSRDN NTYLTWGTE
4555	12606	A	5460	69	418	LKSKLSDYKINL/QKSVTFVYTSN*SEK/ QFKKEIQFTNSCKDN*KNYLGINVIKEVK /DLYN/ENY*ILIKNEKNPKK/WRAIPCSW FGRINIVNKFILPKVGYRSNAIPMKMPV TSRTRG
4556	12607	A	5461	2	216	YLFYLLPRLKCSGVITAHCSLYLPGSKY PPHSAS*VAGTTGPATMSS*YF*FFVETR FFLCSPGWS*GSSSDPSASASQIVKIGVS HCTCPRNFRNRLAQLHFTGEETVPRKK GDLWPVYRQTQG*IPGPHRCQVLA*PK DFLLSPHIYVSTSILWPPA*AAEVQWC DHSSLQPLPPRFKISSPLSLLSSWNHRSCH HVQLIFLIFCRDKVLPVFPRLVLRLEQ
4557	12608	A	5462	59	403	KRGFNFAGPDKREWGEFG*LPKWLPG* NNFSGQTLRRSGD*RKTPHGGVNLVF*E KTGFSNLGRGGLKPPPSGNTPAWPPKGV GITGASSPPVFCFLGFCENTNLRAKKK FI
4558	12609	A	5463	1	242	

4559	12610	A	5464	15	276	ASVTQAGVQWHNLGSLQPPPRFKQFSC LSLPSSWDYRRPPCPTNFLFLVLARMV SIS*PHDPPASASRSAEITGVNHARPGLF L
4560	12611	A	5465	2	309	EQKFNKQKGRRALRCRGGSLGSLSCSK DVKVSFFSVARLQCSGLILAHCNLHLPGL SDSPASAS*VVGTPGQRHHAQLGFVFLV EMGFHHVGPVMVFDLLTSG
4561	12612	A	5466	1	1209	GGIPALDKNVAELTVMDVYDILSLVGHE VERVIDQHGCEAIARLMPKVVRVLEILE VLVSRHHVAPELDELRLAPLRVRVRM DLIEKERKHQKELELVEDVWRGEAQDL LSQIAQLQEENKQLMTNLSHKDVNFSEE EFQKHEGMSERERQVMKKLKEVVDKQ RDEIRAKDRELGLKNEDVEALQQQTRL MKINHDLRHRVTVEAQGKALIEQKVE LEADLQTKEQEMGSLRAELGKLRERLQ GEHSQNGEEEPETEPVGEESISDAEKVA MDLKDPNRPRFTLQELRDVLHERNELKS KVFLQEEELGLL*E*RNGRGKPNTPPTH RPPEDGPPSRESGIKATCLASFFPEVKKR LGQTHRGNVHIQGVPLDKLGKHTAMT GYTEQRTGSPCSIC
4562	12613	A	5467	1	388	FKDPEAVRALTCTLLREDFGLSIDIPLERL IPTVPLRLNYIHWVEDLIGHQSDSKSTLR RGIDIGTGASCIYPLLGLTNGWYFLATE VDDMCFNYAKKNVEQNNLSDLIKVVKV PQKTLLMDALKGSI*V*SMTFCMCNPPF FANQIGSQVE*/YSRNP RP PPSSVNTGGI TEIMAEGGELEFVKRIIHDLSLQKKRLRI DMAALLIGVCSEVSGRKDWIQLAPRW YSCMLGKKCSLAPLKEELRIQGVPKVTY TEFCQGRIMRWALWSFYDDVTVPVHE GRLAVGGVTSDSQNKGSASPPSKRRKLE KPRKPITFVVLASVMKELSLKASPLRSET AEGIVVTTWIEKILTDLKASINEFPVEK RKSAFS*RP*KTPGFI*GERKESV*DSDKS TLRRGIDIGTGASCIYPLLGLTNGWYFL ATEVDDMCFNYAKKNVEQNNLSDLIKV VKVPQKTLLMDALKGSI
4563	12614	A	5468	72	680	LEEP RQSL EGHTEGERAALPGKAKVVE GRVADDGVPGQPAWPGAPHTAAFQPV HALGSTASQQGSLGDC*AA CR*Q*KAP *VPKQGT*QERSSTK/PRAVPSGHWAGG SGCRCSE*RAALG*TTTPQQSGELPGPPW PLEGAHPLSAETGSCVPPRAFSGQGKQ PRGPG*AAEGPHGDFPQTGDRHCPPSSTE PSGMTGR
4564	12615	A	5469	259	373	
4565	12616	A	547	5	960	PTFSRAVATMFSRAGVAGLSAWTLQPQ WIQVRNMATLKDITRRLKSIKNIQKITKS MKMVAAAKYARAERELKPARIYGLGSL ALYEKADIKGPEDKKKHLIGVSSDRGL CGAIHSSIAKQMKSEVATLTAAGKEVML VGIGDKIRGILYRTHSDQFLVAFKEVGRK PPTFGDASVIALELLNSGYEFDEGSIIFNK FRSVISYKTEEKPIFSLNTIVASC*QHGV YDDIDADVAAKITQEYNLANIYYSLKE STTSEQSAIRMTAMDNASKNASEMIDKVL TLTFNRTRQAVITKELIEIISGAASSVKKE NSAS
4566	12617	A	5470	1	336	

4567	12618	A	5471	1	1396	GAHAPHNPVMPASMGSAVNDALKRDK DAIYGHPLFPLLALVFEKCELATCTPREP GVAGGDVCSSDSFNEDIAVFAKQVRAE KPLFSSNPELDNLMQAIQVLRFHLLLELE KGHELCDNFCHRYISCLKGKMPIDLVID ERDGSSKSDHEELSGSSTNLADHNPSSW RDHDDATSTHSAGTPGPSSGGHASQSGD NSSEQGDGLDNSVASPGTGDDDDPDKD KKRQKKRGILPIVFPNIMRAWLFQHLTH PAYPSEEQNIQLAHDGTGLTIFQVNNWFIN ARIGIVQPMIDQSNRAGFLLDPSVVSQGA YSPGQPMGFSFVLDGQQHMGVIRPAGTY EWDGA*IWAWMGNGTTC*PSSC*RHSQ SKGEVCRAWPGDYVSQGGPMGMSMAQ PSYTPQMTPHPTQLRHGTPNAFHILPSL PHHPGLD*LHGGTPYPTWD*LC*AQSPT MLNSVDPNVGGQVMDIHAQ
4568	12619	A	5472	3	862	TMRPDIDNSQAAHQPPGRLPNSRKLKKT RRQMCCVQTKKRIARLPCCRNTPPTAR SHPGRDCAKPNT*SLRSPGGDCH*QGNT TWRMPMAR*LSGDSESGRSPVRTICHQP SRSQSPVDRLQQLPASQSTQLPCSSSPQ ETTQSRPMPPEARRLIVNKNAGETLLQR SARLGYESVLYCLENKICDVNHRDNA GYCALHEACARGWLKFVRHLLLEYGAD VNCSAQDGTPLHDAVENDHLEIVRLLL SYGADPTLATYSGRTIMKMTHELMKEF LTDLFK
4569	12620	A	5473	1	444	KLLRWLRQENCLNLGGGSCSELKSHHC TPPWMIEGDSI*KKQNKTKTRKRKPQGS HS/TLSGGPDWV*QNCEVSQVLPISHFPL LQDILPPLPYLGANGQAGEQGATDGH*/R TTTESHRAVGCRIPWLCQRPLALALSFF LCEMR TIP
4570	12621	A	5474	2	330	EMSFALVAQAGVQRHNLGSLPLPPGFK *FSCSLPSSWDYRYAPPTPANFAFLVE TGCLHVGGAGLKLPSGNLPTSASESAG IIGVSHCAQPGTATHSNTVLSGLFC
4571	12622	A	5475	2	363	ELDTLCDLYEP*PSPSIIFINTRRK/VDWLT EKM HARDFTVSAMHGDMQKERVIM REFRSGSSRVLITTDLARIGRGGFRGRKG VAINMVTEEDKRTL RDIEIFYNTSIEEMP LNVADLI
4572	12623	A	5476	112	434	ARGIDVQQVSLVINYLPTNRENYIHR*A *IWNTPLPLHTWPSLGLKLLIFLIPFLVFQ IGRGGFRGRKGVA INMVTEEDKRTL RD ETIFYNTSNEEMPLNVADLI
4573	12624	A	5477	3	724	NSNVEREEWKLDTLCDLYETLTITQAVIF INTRRKVDWLTEKM HARDFTVSAMHGD MDQKERVIMREFRSGSSRVLITTDLL/A E*RELIKAEGRIQGDLSKGTSVPLRKV AAWNIIWHA*GLWGTGMLISSAFLGCPH GCLSVFPPG*SVLRAHAEELSFLTHARGI DVQQVSLVINYLPTNRENYIHRIGRGG RFRGRKGVA INMVTEEDKRTL RDIEIFYN TSIEEMPLNVADLI

4574	12625	A	5478	1	1274	MSASQDSRSRDNGPDGMEPEGVIESNW NEIVDSFDDMNLSESLLRGIYAYGFEKPS AIQQRAILPCIKGYDVIAQAQSGTGKTAT FAISILQQIELDLKATQALVLAPTRELAQ QIQKVVMALGDYMGASCHACIGGTNVR AEVQKQWMEAPHIVGTPGRVFDMLYR K/YTLSPKYTKMFVLDEADEMLSRGFKG QIYDISKRLNSTTKVVLSSATMPFDIVL EVTKKFMRGPPFRILVKKEELTLEGIRQF YTNVEPEEFNLDTLCDLYENLDHHPRQ VIFHQPPGGKVDW/LSPEKMHARDFTV SAMHWRFWTQKERRT*L*REFRSGS*PE F*ITPLTLPAQRAFDVASRVSF*SFKLMTL PPPTRGKLLIHRIGSRVDRFGRKGVPINM LTE/EKTKRNLEDIETFYNTSNEEMPLNV A
4575	12626	C	5479	114	302	MKEILKKTAE LYKRAMXNKXKQKHHS WVXKAPSRFFIKWETRLGLKTAHSPNVF LQQGQR**
4576	12627	A	548	1326	1780	YLSKLPYFELESIAAARSPTAQRHPRER KLKPARIYGLGSLALYEKADIKGPEDKK KHLIGVSSDRGLCGAIHSSIAKQMKSEV ATLTAAGKEVMLVGIGDKIRGILYRTHS DQFLVAFKEVGRKPPTFGDASVIALELL NSGYEFDEG
4577	12628	A	5480	1	2043	
4578	12629	A	5481	153	332	QTFVLAEGKH*ENE/PVFKLNVSPLEW REGAFPPKSDVSASFISIALLYNSAAFSKS PPS
4579	12630	A	5482	2	904	HILLVNLKHLQLCTRKNRNFILFHFRKK SFMGHQRAIKKKGNLYGFALLRRRALQ VEELTLGKDTDPNARTLNELGGLYYLQN NLETADQVLKRFL*MRERVLPDHPDC AQALNNGAGSYAMKKNQYDKPEDLYK RALDIGRRALAPDHPFLAYTVKHLAILY KKMGKLDKAVPLYELAVEIRQSFSGPK HPSVATALVNLAVLYSQMKKHVEALPL YERALKIYEDSLGRMHPRVGETLKNLAV LSYEGGDFEKAEL YKRAMEIKEAETSL LGKAPSRHSSSGDTFSLKNQLHFS
4580	12631	A	5483	2	331	PGQHGETLPLLKIQLAGQGGTSL*SEPL RRLRQENCLNLGGRGCSETRSCHCTLV WVTGRDSISKQKTAVDQAEERVSELEDR LFENTQSEKTEKRIKISTLRGFRK
4581	12632	A	5484	26	117	AKGQVALGRPGARMQGGSKVVGVLAG PGSRSEAGTVPSYPAAQTRPHPPQPLLI RSPGVVPNGHQGPPNSTASSKQCNLRC WGLPTVARHPKSGQRPQ/PRPTR*PGPSP QGPTPGRKNPERP*LVQQ*PCWAREPV
4582	12633	A	5485	111	270	
4583	12634	A	5486	240	406	
4584	12635	A	5487	128	657	ESESYWAICSRKRSPVLSSYGGHIYLKIR CPVDSVSGRRGFLTIFEDVSGFGAWHR RWCVLSGDCISYWAYPDDEKRKNPIGRI NLANCTSRQIEPANREFCARRNTFELITV RPQREDDRETIVSQCRDTLCVTKNWLS ADTKEERDLWMQKLNQVLVDIRLWQPD ACYEPICKP

4585	12636	A	5488	1076	3513	IKALSSSAEDASLVNASISSSVKATSPVKSTTSITDAKSCEGQNPPELLPKTPISPLKTGVSKPIVKSTLSQTVPSKGELSREICLQSQSKDKSTTPGGTGKPFLERFGERCQEHSKESPARSTPHRTPIITPNTKAIQERLFKQDTSSSTTHLAQQLKQERQKELACLGRGRFDKGNIWSAEKGKNSKSKQLETKQETHCQSTPLKKHQGVSKTQSLPVTEKVTENQIPAKNSSSTEPKEVIREIEMSVDDDDINSSKVINDLFSDVLEEGELDMEKSQ/AGDGSSISR/TA AKNRKMH*ISPQCLYLHHWHKQLV*V*CPHLDWN*KTPAEVMKVQNQENSKELVS/RRAESGDSLGSSEDRDLLYRSQRFKETERPSIKQVIVRKEDVTSKLDEKNNAFPCQVNIKQKMQELNNEINMQQTVIYQASQALNCCVDEEHGKGSLEEAEAEERLLLIATGKRTLLIDELNKLKNEGPQRKN*G*S/APSEFIAIPKDQFTLSEIRLP*KADFCSTVQKPD AANYYYLIILKSRSENVMVATPLASTSNS LNGDALTTFTTFTLQDVSNDFEINIEVYS LVQKKDPSGLDKKKKTSKSKSNIHSSV MASPGGLSAVRTSNFALVGSYTLSSV GNTKFVLDKVPFLSSLEGHIYLIKICQVNSSVEERGFLGCPGGRLQPKRQTIFEDVSGFGAWHRRWCVLGNCISYWTYPDDEKRKNPIGRINLANCTSRQIEPANREFCARRNTFELITVRPQREDDRETLVTNAGTHSVFTKNWLSADTKEERDLWMQKLNQVLC DIRLWQPDACYKPIGKP
4586	12637	C	5489	135	206	MFIFAFGKSIFKITTTFQSTIVG*
4587	12638	A	549	20	403	KVQGPASAHASGEGSLTIIPVTRSPLATMNHIVQTFSPVNSGQPPNYEMLKEEQEGAMLGAPHNPAPPMSTVIHRSETSPVDHVVWSLFNTLFMTGCLGLITFVYSVKA\ RDRKMGRRTTPGAQG
4588	12639	A	5490	67	388	DAVFA/GAMPTMASVKLSTLHPIVNHPIH YEDADLRPGCSMLEIWDVEDPSNAANPP LRSILLEDARPKMPVVFQNSVYRVLKVN* EGNYPHYGTMPCKNNHPLAYLH
4589	12640	A	5491	3	107	SIKLSTLHPIVNHQHYEDADLRARTKIVYSTYSRTSAKEVRDKLLELHVNYVLEEAWCVVRTKFILODGPVLAQAAEK*COMVTQIYKKYSNALEMPGCSMLEIWDVEDPSNAANPPLCSVLLEDARPYFTTVFQNSVYKVLKVN*EDADLRARTKIVYSTYSR
4590	12641	A	5492	3	289	YYLSPPEMGAIFEDPAHVVVYIIFMLGSCAFFSKTWIEVSGSSAKDVAKQLKEQQMVMRGHRDTSMVHELNRPKVKLRRWKGEGRHFTKRILFY
4591	12642	A	5493	2	652	RVDLPIKSARYRGQYSSYPIKLFYTSNIPII LQSALVSNLYVISQMLSVRFSGNFLVNL LGQWADVSGGPARSYPVGGLCYLSP PESMGAIFEDPVHVVVYIIFMFGSCAFFS KTWIEVSGSSAKDVS*TA*KEQQMVMRGHRDTSMFHELNRYIPTAAAFGGLCIGALSVLADFLGAIGSGTGILLAVTIIYQYFEI FVKEQAEVGGMGALFF
4592	12643	A	5494	58	596	KFIFRDGGSLLCCPSWT*TLGLQQSSHMSL PSDWDSRVRAKPNFPFSS*HSFSALYMHLP RSPLNFIQPCRFYKGPAGLSRGGRE*HGL*SDFSANLWQLGFLWQALTDYRAELPGMDPIISTHLAKLYDNLLEQNLRVIEPFSRVQVRTLWGLHFWPGILTVATSLPHLSRMGTHF

4593	12644	A	5495	2	951	PRVRPRVRPRVRSSRPRSRDPSRRARLR WQLRWKPRWCPRPPKTPGVWKRPRTRP RSSAGGSTGFPSSPILRRSPSTRRRSSRKA SPTATRATGTPPRQAQRKTARAAGRRA SPGIATAGTRSMISMRRPGKPSNPSWEG RTNEETSSLSRLKPVSPGTTTCPLRTPGSL LKDSKIPISIKHLTNLPSSHPVVHQPSRS EMPRTKIPVSKVLVRRVSNRGLAGTTIR ATACHDSAQKVVRSSRPRWMGMPRNT TFPWETTKVSFAFPKESLL/WTPPVPRPA PERGPRRLCPE*GPDNTRKRDATRGFLL SR
4594	12645	A	5496	1	279	VQWHDLG*PQPPPPGFKRFSCLTPP/RSS CDHRCAPPTPD*FLCFLVETGFHYVGQA GLELLTSGDPPTLASQSAGIAGVSHHARP NFLIFFFN
4595	12646	A	5497	2	291	FLVARVAGSGGDGLTLFPRLECTSVITAP ASISWAQGDLPASASQVAQTAGACHHS WPVFTSCVEMGFPCVP*AGLELLGSSPP PQPPKMFRQA
4596	12647	A	5498	2	345	SHSVAQIGVQWRDLGSLQPSPPGFKRFS CLSLPSS*DYRHAPVHPANFFFLVEMWL PRVSQDGLDLLTSDLPSASQSTGITGM SHRARNFCIFSRDRVSPCWVWSQTPD LR
4597	12648	A	5499	2	311	QVLENPHFPRG*APPSW*YPSGFYKSNR PRACFNPRSLAPRGPHQGFPPGPIAFP PPFLGPPYGSRFFPSEHFQKVQPLNQPPF LSLKNPP*RFPFFFP
4598	12649	A	55	730	950	SFLKDIGLFKIIYFFFFFETGVSFCHPRLE CSGETMAHC/SLTSLGPGDPPTSAS*QAG ITGVHHHARLIFF
4599	12650	A	550	2	431	DAWAMNHTVQTFSPVNSGQPPNYEM LKEEHRVGCAGAAPTTLFPPTSLIHNRO RDLPCPTHVWVSLFNTLFMNP/CLGFQ *EFAYSVKSMRKMVGDTVGA/QAYAS TAKCLNIWALILGILMTILLIVPVLIFQA YG
4600	12651	A	5500	1	2500	MEDAWGIRKETGRVKEEAKEVTGWGN NWRNVEKSSMSRKVKAARPGFKKLPM SDIPPKCTIKDLLPKEKSSTEAVFHTVVL ERHESPDIEDFSFKEPQKNVHDFECQWR DDTGNYKGVLMAQKEGKRDRDRRDIE NKLMMNQLGVSFHSHLPELQLFQGEK MYECNQVEKSTNNGSSVSPLQIQPSSVQ THRSKKYHELNHFSLLTQRRKANSCGKP YKNECGKAFTQNSNLTSHRRIHSGEKP YKCECGKTFTVRSNLTQHVIHTGEKPY KCECGKVFRHNSYLATHRRIHTGEKPY KNECGKAFRGHSNLTTHQLIHTGEKPF KNECGKLFTQNSHLISHWRIHTGEKPY KNECGKAFSVRSSLAIHQTIHTGEKPYK CNECGKVFRYNSYLGRHRRVHTGEKPY KNECGKAFSMHSNLTQHVIHTGTPKF KNECSQVFTQNSQLANHRIHTGEKP YKNECGKAFSVRSSLTTHQAIHSGEKP YKCECGKSFTQKSHLRSHRGIHSGEKPY KNECGKVFAQTSQARHWRVHTGEKP YKNDGCGRAFSRSSLTFHQAIHTGEKP YKCECGKVFRHNSYLATHRRIHTGEKP YKNECGKAFSMHSNLTTHKVIHTGEKP YKCNQCGKVFIQNSHLANHQRTHTGEK PYRCNECGKAFSVRSSLTTHQAIHTGKK PYKNECGKVFTQNAHLANHRIHTGD KPYRCTECGKAFRRQGVTPGPSLECN GTILAYSSLKFGSSDTHISLLRSQDDRQVL PHLANPNFREGLLPAFLLLCSDSHFLQFC SQFAPRKTQSGSVNNIQANIIAK

4601	12652	A	5501	1	2508	MPHQLGPNLVPDIPPCKTIKDLLPKEKSS TEAVFHTVVLERHESPDIEDFSFKEPQKN VHDFECQWRDDTGNYKGVLMQAQKEGK RDQRDRDIENKLMNQLGVSFHSHLPE LQLFQGEKMYECNQVEKSTNNGSSVS PLQQIPSSVQTHRSKKYHELNHFSLLTQR RKANSCGKPYKCNECGKAFTQNSNLTS HRRHSGEKPYKCSECGKTFTVRSNLTH QVIHTGEKPYKCHECGKVFRHNSYLATH RRIHTGEKPYKCNECGKAFRGHSNLTH QLIHTGEKPFKCNECGKLFTQNSHLISHW RIHTGEKPYKCNECGKAFSVRSSLAIHQ IHTGEKPYKCNECGKVFRYNSYLGRHRR VHTGEKPYKCNECGKAFSMHSNLATHQ VIHTGTPFKCNECSKVFTQNSQLANHR RIHTGEKPYKCNECGKAFSVRSSLTTHQ AIHSGEKPYKCIECGKSFTQKSHLRSHRG IHSGEKPYKCNECGKVFAQTSQLARHW RVHTGEKPYKCNDGCGRAFSRSSLTFHQ AIHTGEKPYKCHECGKVFRHNSYLATHR RIHTGEKPYKCNECGKAFSMHSNLTHK VIHTGEKPYKCNCQCGKVFTQNSHLANH QRIHTGEKPYRCNECGKAFSVRSSLTTH QAIHTGKKPYKCNECGKVFTQNAHLAN HRIHTGEKPYRCTECGKAFRVRSSLTT HMAIHTGEKRYKCNECGKVFRQSSNLA SHHRMHTGEKPYKIECGEVIRYNSLLSH QLNHS*QNPYKCSDSGQSLMS*SINRYER P*ARD/YHVNICGRGSIQASQVTRHQDFI SLMKRNKCNMHPEAITQ*PMVSEDS
4602	12653	A	5502	3	361	PKKNYFPLHLKGPKTKGVFFYSSSSSSQK GVSLCNPWRNAVGPFGFPSTPPSLVK*F LCPNPWS*CDFRPPSPRPGYFCFFNKKA LLARVVFNS*PQVIPLFQPPKMVGFGLT PLAG
4603	12654	A	5503	32	392	FLFLSFPPLSFKMTLNDAMRNKARLSITG STGENRRVMTPEFPKAVHAVPFT*SPGH GNGMSSVTESLGGLIRTLALSALPQWFSC VFIVQSGERHPSILEDFSQPKNSLNMWS SILKL
4604	12655	B	5504	473	524	MGEAKKTGEQVRVLPRTX*
4605	12656	A	5505	1	627	LVSSFFFFFFCRDRVSPCLGWSPTWSPG LKRSARLGLPQCWDSRRELPRAYLLFL LSWGSPSPSAWQEGG/WCKKKRGTEHPE VPSIPSCTCPSPTVQQ*S/GEKQVQETGRQ S/LGEAKKTGVQWHDQGSQ*SGLK*S SYLSFLSS*DHRCAPTTPD*FL*R*DPTML PRLVLNSWAQ/CDHPALA*SQSTGIIGLSH RAWACDQNSHFF
4606	12657	A	5506	3	649	RVSSVMSTSLEEIFNCIFDAHVPLWGKA YPSQKPLAAWTRDLAMRVEQFELWASR ARPPVIFWLSGFTFPTGFLTAVLQSSARQ NNVSVDLSWEFIVSTVE*QAT*VYPPKD GCWVRGLYLEGAGW/DPEELLGGRQS PCKLVWLMPTIHFPAESRKSPKGMYS CPLYYYPNAGSSDRASFVIGIDLRSGA MTPDHWIKRGTAALLMSLDS
4607	12658	B	5507	167	377	XKLIQFGLMKNLIRRLQKYPVRVTREEQ SHPARLYTGCHSYDEICCKTGMSYHELD ERLENDPNIIICWK*

4608	12659	A	5508	2	1247	TPLREERGATGLGPVIAMGSGCRICIFFS EFHPTLGPKITYQVPEDFISRELFDTVQV YIITKPELQNKLIT/VLESSFVSMEEKQK LVPIMTILLEELNASGRCTLPIDESNTIHL KVIEQRPDPVPAQEYDVPVFTKDKEDFF NSQWDLTTQQLPYIDGFRHIQKISAEAD VELNLVRIAQNLLYYGVVTLVSILQYSN VYCPTPKVQDLVDDKSLQEACLSYVTK QGHKRASLRDVFQLYCSLSPGTTVRDLI GRHPQQLQHVDERSEENLLGHLGVT*GK LDPLCLSGALDHGALPIQAGFLEMMGYR DKIEGRLQERVGLPERRPGQGVTPSSDP HPRKLIQFGLMKNLIRRLQKYPVRVTR EQSHPARLYTGCHSYDEICCKTGMSYHE LDERLENDPNIICWK
4609	12660	A	5509	1	512	CTLPIDESNTIH*KVIEQRQTPRVAQEYD VLVFTKDKEDFFNSQWDLTTQQLPYID GFRHIRKISAEADVELNLVRIAQNLLYY GVVTLVSILQYSNVYCPTPKVQDLVDDK SLQEACLSYVTKQGHKRASLRDVFQYD EICCKTGMSYHELDERLENDPNIICWK
4610	12661	A	551	137	838	SSGICSALIWPWPALHLTNARKRKLRLK RNYWRKGEGSLRTIPVTRSPVTMNHIV QTFSPVNSGQA/PNYEMLKEEQEVAML GAPQKPCLECPPIHNRSETSVPDHV/V WSLFNTLAFMNTC/CRLGFIAFA\YSSEVS GTRKMVGEVTRAQGLPPPKCLNIWA/ LILGUFMNQFLNLNHPSPSVGSSRPSDRSG RHHLRPRELCPVEPVSVKNSIFHSLALP PEARKEFCP
4611	12662	A	5510	1	474	HTIHLKVIEQRPDPVPAQEYDVPVFTKD KEDFFNSQWDLTTQQLPYIDGFRHIEKIS AEADVELNLVRIAQNLLYYGVVTLVSIL VRKLIQFGLMKNLIRRLQKYPVRVTR EQSHPARLYTGCHSYDEMCKTGMSYHE LDERLENDPNIICWK
4612	12663	A	5511	199	562	KESPGPGRHPVPLIPHP*ES*IPVRAL*KN LIQATYRKYPVRVTRREEVRAHPARLYTG CHSYDEICLQDRWRQAGSQGGFRAGCA RPRPLTSPPPHPGMSYHELDERLENDP NIICWK
4613	12664	A	5512	1	1224	EFGTRPLREERGATGLGPVIAMGSGCRIE CFFSEFHPTLGPKITYQVPEDFISRELFDT VQVYIITKPELQNKLITVTAMEKKLIGCP VCIEHKKYSRNALLFNLGFVCDAAQKTC ALEPIVKKLAGYLTLELESSFVSMEEK QKLVPIMTILLEELNASGRCTLPIDESNTI HLKVIEQRPDPVPAQEYDVPVFTKDKED FFNSQWDLTTQQLPYIDGFRHIQKISAE ADVELNWVRMAQNLLYYGVVTLVSILQ YSNVYCPTPKVQDLVDDKSLQEACLS YVPKQGHKRASLRDVFQLYCSLSPGTT VRDLIGRPPSSCOHVDERKLIQFGLM KNLIRRLQKYPVRVTRREEVRAHPARLY TGCHSYDEICCKTGMSYHELDERLEND PNIICWK
4614	12665	A	5513	2	313	FETESYSAQAGVQWWDLGSLQPPPPGF KRFCSLLSSWDYRPPPRLANF*FLVE TGFHHVQAGLDLLT/S/GDPLASASQSA GITGLSHCAWQTTYITFNHK
4615	12666	A	5514	731	1156	SVLGLISDTSNTFLSFFFFFEMESHSLAQA PLQWHYLGSLQAPPPCKRLRPGSRHSPA SASRVAGTTGARHHARLIFGFLVEAGC HRVSQDSLDDLTS*STCLKP/AQSAGITRR EPPTPLGFFFLKMESCSVGPRLGVSQSW
4616	12667	A	5515	3	365	LLNSRPVDFFFFFFFLHSL/DSVVQAGV QWHNLGSRLLQSPPPGSMPPFCSLLSS WDYRHPPPYLANFFFFCIFSRLD/MGFTML ARMVSI*PCDLPALGSQSAGITGVSHHA

						WPAYFYFQ
4617	12668	A	5516	400	619	MPEQICPLETSQS*INNLPKKFFMSI*CP GFERSYFFF*CC
4618	12669	A	5517	274	693	KYQILLYNGDVMACNFMGDEWFVDS LNQ/KGKVEIPGPGIEPAGEEWGAGMPG SGQLAAWLWAHRGQVWRNSQP*GLAG SCEQGCSCCRLMSFLVGQMEVQRRPW VKYGDSGEQIAGFVKEFSHIAFLTIVGT GPAER
4619	12670	A	5518	3	766	NRLWSSLQTHCCSQNKCNFYDNKDLEC VTNLQEVARI/VGNSGLNIYNLYAPCAG GVPSHFRYEKDTVVVQDLGNIFTRLPLK RMWHQALLRSGDKVRMDPPCTNTTAAS TYLTNPYVRKALNIPEQLPQWDMCNFL VNLQYRVFLPSQNSR\YKLLSSQKYQIL LYNG\DVDMA\CNFMGDEWFVDSLNOK\ MEVQRRPW\VKYGDSGEQIA\GFVKEF SHIAFLTIVGAGH\MVPTDKPLAAFTMFS RFLNKQPY
4620	12671	A	5519	2	279	FLRDVILL/C/HPGQSVV*S*LTVSPTLTP GSSDPSSAFNCWEYRCVTPCQLMF*FT LLSIGIGSTLPRPVLNSSPQVILAPWPKV LRLQE
4621	12672	A	552	1	528	
4622	12673	A	5520	2	1045	CPSRPCRRRPPPPRGPKPRASYPGGPAP/ GDKKKRPPQ\GPRGSSPAPGPPPPQEA GPAPRPGQDAAAGPSGRVPPQALPSPR GPQPRAPRPGRQAPATAQRGPPMRRPRR GRGPPPRAPP/PGAGPC/PRLRCALLPESH PRGRPGHPEASSGEAAAGAAPQALPLTL GRTQAPTRPVSPG*GRGPAEGRPRQR/PP THPPPPA\GPPRASARRPAAARRPAGSPA QPAARGPAADAQGVAAQRAAQVRRRG VRGGARGGGRGP/RGPRGR/PGSSGRQR PLSGPSAQAGPRGAQPDSPDGHGPPPAL ASRQPGPFSFTPVVSTPDACLPHSGLLL ASPSIHAVRGELSN
4623	12674	A	5521	84	202	
4624	12675	A	5522	3	576	ILGPPFFVRWGSHTVAQAGVQWCDHGS LQPRSPGVK*SSHLSLLGSWNHRHATT PG*FCFFSRIRSHCVAQAGL*LLTSNHPP ALASQIVGITGVSHWTWPNTGFSVLTA TNKNLKFFHYAISKCLVRAKLSSRLKIE ERNKALSAPVVSVSIFDRVRLLLGYSAS DWQPEFVETAVSNFVIYGIFRGQ
4625	12676	A	5523	177	904	ESHLQNDTAAHPLLNGTECGVSPPPLTS RQGVRRRTQSSTSRCT/SPVIPKQTFPQP VLHMSAGVALDSPAPPPRPWQPPQGF AHT*DRKEEGDPIGIWAPEGKCTPKPPP PSLPRTSPGWKRALQKGDTCGPGPSTAS TPHPLILGPSQAPPKPKPP/PSGPVACAP S/YPALPAPSSISLTEKEQARAPGGQDAG HTVGGGAAGRREGQNKTFSGFFFSFF FLPFTLVVVLFLSFL
4626	12677	A	5524	1	173	FLGPSKFPPPGFPPFFPPPPRERGNQRSSS PPSSSS/P/PSQKKTGVPPG*PGGFFPPPP
4627	12678	A	5525	1	390	LILNTRKPAFIDLLHNLDPEQAYADLV SAYTLNSMFWLYLATQGVNPTDHPVKH ELDTT/RACMNRSSSPTDKKKAGLLYRG AASKFVKNALWEPKSKNA*KVGNKGKS PTSLFGFDVHIFKKNMLPPP

4628	12679	A	5526	1	1548	MPERDSEPFNSNPLAPDGHVDVDPHSFHQ SKLTNEDFRKLLMTPRAAPTSAPPSKSR HHEMPREYNEDEPAARRRKKKSYAK LRQQEIERERELAEEKYRGRAKERRDGVN KDYEE TELINTTANYRAVGPTTKADKSA AEKRRQLIQESKFLGGDMEHTHLVKGLD FALLQKVRAELASKEKEEEEELMEKPQKE TKKDEDPENKIEFKTRLGRNVYRVLFKN/ KAYKRNELFLPGRMAYVVKVDCPTMEA QTILTNDIVISKLTQLLSYLRQGTRNKK LKKKDKGKLEEKPAEADRSIFEDIGDY TPSTIKTPWDKERERYRERERDQ/RDRDR DRERERERDQERERDRERERDRER/GPG SAKELIKSINEKFAGSAGWEGTESLKIAE DKKQLRDFFGMSNSYAECYPATMDDM AVDSDEEVDYSKMDQGNKKRTLRSWD FDTQEDYSEYMNNKEALPKAAFQYGIK MSEGRKTRRFKETNDKAALDCQWKISAI IEKRKKMEADGVEVKRPKY
4629	12680	A	5527	1	3162	
4630	12681	A	5528	2433	2540	
4631	12682	A	5529	1	1739	MPERDSEPFNSNPLAPDGHVDVDPHSFHQ SKLTNEDFRKLLMTPRAAPTSAPPSKSR HHEMPREYNEDEPAARRRKKKSYAK LRQQEIERERELAEEKYRGRAKERRDGVN KDYEE TELINTTANYRAVGPTTKADKSA AEKRRQLIQESKFLGGDMEHTHLVKGLD FALLQKVRAELASKEKEEEEELMEKPQKE TKKDEDPENKIEFKTRLGRNVYRVLFKN/ KAYKRNELFLPGRMAYVVKVDCPTMEA QTILTNDIVISKLTQLLSYLRQGTRNKK LKKKDKGKLEEKPAEADMKYVS*PLA SDQREGVCTFLVSGILGRC*HENLEKWS GGVKVYV*IWPASDLHFPSIFEDIGDYVP STTKTPRDKERERYRERERDRERDRDRD RERERERDR*HERERDREREKKRHSY FEKPKVILLGPWTFDKGPGSTKELIKSFI EKFAGSAGWEATESLKKPEDKKQLGD FLGMSNSYSECYPATMDDMAVDASDEE VDYSKMDQGNQEGGP*ARWDL*FPQE EYKRVFVTTKEALPRVAFQYGIKMSSE GRKTRRFKEPQ*PKQSLIRQWKKI
4632	12683	A	553	1	1682	MDNLSDTLKKLKITAVDKTEDSLEGCLD CLLQALAQNTTETSEKIQASGILQLFASL LTPQSSCKAKVANIIAEVAKNEFMRI PCV DAGLISPLVQLLNSKDQEVLLQTRALG NICYDSHSLQAQLINMGVIPTLVKLLGIH CQNAALTEMCLVAFGNLAELESSKEQFA STNIAEELVKLFKKQIEHDKREMIFEVLA PLAENDA IKLQVEAGLVECLEIVQQK VDS\KEGGITELKTGSDLMVVLLGDES MQKLFEGGKGSVFQRVLSWIPSNHQL QLAGALAIANFARNDANCIMVDNGIV EKLMDLLGRHVEDGNVTVQHAALSALR NLAIPVINKAKMLSAGVTEAVLKFLKSE MPPVQFKLLGTLRMLIDAQAEAAEPIGE RMLKLVERLVGWCEAKDHAGVMGEGQ NRLLSALIRHSKSKDVIKTTVQSGGIKHL VTMATSEHVIMQNEALVALALIAALELG TAEKDLES AKLVQILHRLADERSAPEIK YNSMVLICALMGSECLHKEVQDLAFLD VVS KLRS HENKSVRQQASLTEQRLTVES
4633	12684	A	5530	93	546	YNCRPTLGVS GCAGLDAQVVCQDCAFE LGKKP/PSGGEQYPSSSAIKQGPKEPYAD FIARLQESLKKVIADLAAQDIVLWLLAFD NANPECQAALRPIRGKAHLVDYTKVCD GIRD KLHKATLLAQAMAGLRMGKGNTF FPGACFNCGKHGH
4634	12685	A	5531	1	541	

4635	12686	A	5532	365	661	
4636	12687	A	5533	3	74	RMGPRTGP*VFPETGFPPLSNLE
4637	12688	A	5534	83	262	CTVTPPPQDTGQSKS*STRVSSSLVPRSP VAPVTLRPGFEPP*WTPLAKTSSVLTQW C
4638	12689	A	5535	636	698	
4639	12690	A	5536	125	340	
4640	12691	A	5537	81	1007	QPKAEHAALNLRKTFQHASHTPPFSAQQ *NPHRPHQPWL*HALVQHSCSDMQRPS ASGP*/PPGTFSRWSSCKMPVPPPAQVPK SLCGVLSSSC*PGRSPGPAEPPSRACRP CRQDSG/PAQAGGPCRQDSG/PDPAGGPR DKI*ASQPGLPAGERAIAGGPCRQDRGQ PRLASSAGGHCRLRG/PTPAGGPCRL/P QRAAPAGGPCRQDSEQLRLAGPAGRLA GRHGRRSPGPAEPPSRACRQESG/PAQAG GPCRQHSG/PDPAGGPRGQLSLPAGPAR RRAGNPGRQPLQTGGQRAAEAGEPAFAT AVSGRD
4641	12692	A	5538	1	766	
4642	12693	A	5539	74	1178	
4643	12694	A	554	3	910	GRPPRVPPWLRERRRLEGGHRAAPPAPY DLRLAPPVPHPRGATWQIILSDTLKKLKI TAVDKTEDSLEGCLDCLLQAILAQNNNT ANKCKKSKQVAILQLFASLLTPQSSCKA KVANIAEVAKNEFMRIPCVDAGLISPL VQLLNSKDQKVLLQTGRALGNICYDSHE GRSAVDQEGGAQIVIDLRLSLCSITDPA NEKLLTVFCGMLMNYSNENDSLQAQLI NMGVIPTLVKLLGMHCQNAALTEMCL VAFGNLAELDAIKLQLVEAGLVECLLEI VQQKVDSDKEDDITELKTGSDLMV
4644	12695	A	5540	1	857	MGQVWGLVHFTLELFQTDDEEEQEYNK VTEEVTEHVYLP*PDVHLNQPSHQPPK AGLQLY
4645	12696	A	5541	518	578	
4646	12697	A	5542	750	797	
4647	12698	A	5543	2073	2844	IVRSLSRQAQKIRSGCPCQSW*RRGRPVG SPSQSTEGPGQVRLRT*PLPFHTHEGGP GAGRSRSSLERPTSQPHRSQSGRCPAAP ATPLPSPGPQAPLGAFFERG/PRSRSA/QG APGTGVRFSSMAQFPFPCSTSQPLKPCSP QELKMRLRPKGAPDSSAPGRTAGTPPCL RCWAGSVEPLRRVRGPRRCGRGPAAAA TQWARPLCRARRGTLGGIA*PRSVAAARG SAPAPAAPGAARPGPGMGPAAVAIAIG RP
4648	12699	A	5544	3	611	SLPPRASRLPPGPSFSGWSPGDNRKLPNT PPPPRAGPRPPSRAPPA*TPGPPSAGSWP* PPGTGSAPRGPAAPSAPGARRPGRPGCPA PAGRPRVPTAGAGACSAASRPGRTRPCT RPGAPRSRRRGCGPGA*PGARRPPRP RPPATRAPRSRSPRGAAPPTPRTARGA AARELRVQRGP/APLHAPQQHTPAAIVP YKM
4649	12700	A	5545	3	42	
4650	12701	A	5546	1	160	SMQQTLLLSYF*KLP*PPQPSATMTQISQ QPSTSRQDPPPTK/RL*LVEGSNNH
4651	12702	A	5547	298	421	LHPHILPIDKLLHQ*KVVSVSEYRQNEV PLYSISSNLVHS
4652	12703	C	5548	598	762	MNSMIQICQDRAEIISSYCNLKIHQRLQN LLISFLQSLKKLKNVNLSFINKNLK*
4653	12704	C	5549	138	296	MNLEVTVARDYLSPLADLAQRRGNIQ EIQTRQDNKVVGIVPLAEIMVGTL*

4654	12705	A	555	1062	1421	DRVSLCC/PRLECSGMISAHCNLPSPGFK QFSCSLPNGWAYRSVPPCANFCVF/SV ETGFHHVGGAGLELLTSGDLPALASEKC WDYRREHTARGPVTKPSYFQVLFRLHP IFINHLNT
4655	12706	A	5550	2	1575	AMLGTRVERCLRVLGDGAFAEDASAGV EAQTLTVWRQADKHNIPRICFLNKMDKT GAINFKYAVESIREKLKAKPLLLQLPIGE AKTFKGVDVVMKEKLLWELQFK*WE KTLRRKAPLGK*MIPEFAGRETT*RKEC L*LEQVADLDDEFADLVLEEFCEFDLLP AEKLQTAIHRVTLAQTAVPVLGCSALKN KGIQPLLDVMTMYLPSPEERNYEFQWY KDDLALAFKVLHDKQRGPLVFMRIYS GTIKPQLAIHNINGNCTDRTQIALSVNNH EVHIYKKNGRQCCKAHELKEHNGHITDI DWAPKHDHIVTCGADHNAVWSQKDG VWKPTLMILRINRTATFVKWSALENKFA VGSEARLISVCYFESENDWWVSKHIKKL IRSTVLSLDWHPNNVLLAAGSCDFKHRV FSSYIKEVDEKLASMPWDSKMLFGQLM SESGGGGTGGWVHGLDIPKQSIQRNMSA MECFCNTDKRATTEGSNMALKMLRQNS ITQVSIYEVDEKDCRKYCTTGIDGEP
4656	12707	A	5551	1137	1288	RTLNLKAMASRVLRILTGR*CLDVSIKI PL*ENLGESIMVDSLMLVKVP
4657	12708	A	5552	1	1851	MALKKADKQVLEPLMNLEVTVARDYLS PVLADLAQRRGNIQEIQTRQDNKVIGF VPLAEIMVADLDDEFADLVLEEFSENF LLPAEKLQTAIHKSDTKLRQQLPVLGCS ALKNKGIQPLLDVMTMYLPSPEEL*PM EFLQWYKDDLALAFKVLHDKQRGPTG FYAPFNSRPL*KPQLAHSILMETATERIS RLLLPFADQHVEIPSLTAGNIALTVGLKH TATGDTIVSSKSSALQLVEPNGREKRS TDKTMKAERLLLAGSGRFQEPVFFCTIG TPITV*GSQIWEHAFEMSFSVRIPVLKVR LDPDSGQTVLCGMGELHIEIHDRIKREY GLETYLGPLQVAYRETILNSVRATDLD RTLGDKRHLVTVEVEARPIETSSVMPVIE FEYAESINEGLKVSQEAIEGHSACLQ GPLLGSPIQDVGNLYIP*QIHPWAPSTT YDFCLCLKMPCKKALERKADKQVLEPL MNLEVTVARDYLSVPLADLAQRRGNIQ EIQTRQDNKVIGFVPLAEIMGYSTVLR LTSGSATFALELSTYQAHESSRSKYTAQP EKWFDLNVLVFGRGNSGRHPRLLHFSV RNNFYCLYLLGRNKGTVSGTFRGT
4658	12709	A	5553	2	499	RCQKAKFTPVNRHHCRKCGFVVCGPC SEKRFLPSQSSKPVRICDFCYDLLSAGD MATCQPARSDSYSQSLKSPLNDMSDDD DDDDM/TVTKDTFGSI*SGEAL*EINFGG NARL*ALSLDCSVMNLPEKLGTYVPQYI P*KEGAPAFCHSSHSSSTGIGFCKYIR
4659	12710	A	5554	147	315	LIPQPWGQHLPLPPNISNYD*RPQKFLGL PHPCSFGGRALTPHWSTGLRLTPSAQ
4660	12711	B	5555	105	508	XPGTREVEELNALQEELAPFGLVILGFPC NQFGKQEPGENSEILPTLYVRPGGGFV PNFQLFEKGDVNGEKEQKFYTLKNSCP PTSELLGTSDRLFWEPQESSRHPLELWKF LVGQMDTHHALHHRPRQORR*
4661	12712	C	5556	4	165	MCLSGNVYHLCACSCVVPQGCTTSLQF STPMIIVHLHLPKEKPALGPVLL*
4662	12713	A	5557	1	1803	

4663	12714	A	5558	2013	2024	KVAGSAGHLRRTVARDQAAAQRDPECA PTPSLARLLQASCLLSLLLAGFVSQSRGQ EKSMDCHGGISGTIYEYGALTIDGEEYI PFKQYAGKYVLFVNVAISY*GLTGHVH LN*TALQEELAPFGLVILGFPCNQFGK QEPGENFRRSFFNPSRYGPTKVGGFCSL NFPALLRKGDVNGEKEQKFYTLKNSCP PTSELLGTSDRLFWEPMKVHDIRWNFE KFLVGPDPGIPMRWHHRTTVSNVKMDIL SYMRRQAALGG*RVGCPPFSFKILYFPSR VYSLGGGWSILFPPQNKGSFPKFSRFL GPP
4664	12715	C	5559	2	226	MLLPLPPSPSPSTALPGLGEMGGRPPPPY MLSVAPQTFCFISHSSPSSHRVSFSAPCS VLPPPSQKFLHRTSF*
4665	12716	A	556	213	513	GGKSLARRVPKGRMDGLLNPRESSKFIA ENSRDVFIDSGGARRVAELLAKAAGPE LRVEGWKALHELNPRAADEAAVNWVF VTDTLNFSFWSEQDEHKW
4666	12717	A	5560	2	1308	ALSLLALPPASPP/AGRGRPAGGPAPLP WHQGLPLTRPPEG/PLPQGRLPSPPLQP TPAQPLLLPAFPLLPAPGPRRVGFAPWC P*SPGLSPPGLSPDFQTLPCGISFLPEMR KLESWSPAGEPSPPAPPATRVSSRMQLP DPLTLPPAGPKATFNSYGV/PPPAPE/PS QGRVRGHPEFTGPLLHSSQGQEAAPLP GPCCYGD TAF/PRTEGPPSLPPTTRARLSS PPPRFPADVVCVLSVSLVLCPTSLLVPM */PHPCCTGSLSSWLPLLMMLLPLPPSPS PSTALPGLGEMGGRPPPPYMLSVAPQTF CFISHSSPSSHRVSFSAYPCSVLPPP*APA WAQDPILPARVSPPGRVPFPPC/PPPSHT PGSEAPHS*PSVFLRKWLKATGPPAQPSA PPKPGNLGPHKPLWKLFCASHSFPRSC TELPF
4667	12718	A	5561	3	259	FLFWVFQIPAPFPEYVTDLCICTPTSASP GYLLA\GRDKAQRLWERLRVVFQRALR DGA*AGEAGG\STPNTVTMEMQCPPGNA S
4668	12719	A	5562	2	329	AGVQWRNLCSLQAPPPGPRSFRLSLPSS QVAGTYRRPPSPANFLYV**RRGFTTV NQDGLDLLTSGSPASASQAGISGVSHR AQPSFTFFRLACHVFVRHCHLPT
4669	12720	A	5563	3634	4389	LIQFLLHSIGLYSYTTICLIFILLMEYWL FPVFSYYYYYFFLRRSLALSPGWSAVV QSRLTATSASQVQTILLQPPE*LGLQVC ATTPS*FLYF**RRDFTMLARMVLIS*PR DLPTLASQSAGITGVSHRAWSFLVLF *TESHSVAQAGVQWHDLGSLQPAPLRF K*FSCSLPSSWDYRRPPLRPANFFVFLV ETGFCHVGQAGLELLTSSDLPALASQSV GITSVSHHTRPGMSFFITSHKL
4670	12721	A	5564	1	369	LQPQPGLNQSSLLSSWDYRHMPPY PANF*YFPETRFCHVAQTGLELLSSSDPP YSASQSAGITGVTHRA*PRFTLCTGLIRG QHGEKGLAQGHNVRASSSIQGSVVTWG LRGLFFPHH
4671	12722	A	5565	161	231	

4672	12723	A	5566	1	1401	MQIFDYNSEITDPGIIQEEAAGLEGTRKP WNISMLLTTRNISLCQWFSKCGPEPDTST SWGTPQKEHCHLVNKVGVDLSLRMRGY MHGHIQPLNLFQESQLMPQTLFPFHNQFQ CFFEELHKWRCPDYYENNVRKMQLPFS SKLLGSTLTSEEKQERRQQQLRRLQELN ARRREEKLQLDQERLDRLLYVQELLEDDG QMDQFHKALIELNMDSPPELQSYIQKLSI AVGAG*AENPPSGSQPR/EWDVV/TTASQ RPLTWEQLEPSLEDVESMNDPDLFSEE/ D/TLEWRSRSP/RVQPVFNLAAYHQLFVG TERIRAPEIIFQPSLIGEEQAGIAETLQYIL DRYPKDIQEMLVQNVFLTGGNTMYPG MKS SRMEKELVAG*DP SRLSFKVNLASNP CAGM/DWYGGGLVNWALNHLDDNEVWI TRKEYEEKGGEYLKEHCASNIVPIRLP MSCLPLLRCPRHPSQGSAAAGGGGAG
4673	12724	A	5567	2	131	
4674	12725	C	5568	170	394	MKTNGYQGRVQWLTDLVLNLSRPVQS SRPSLGNMVKPPSIQKLGAWVACTCCP SYSGAGAGGWHEPRSLRLQ*
4675	12726	A	5569	2	583	DRKGLESSPEPPSDCRRPPGMDLLAISPV LLAPSPQVPQSWPSG*CGRQAPCVLES GHSAGAGVSSWDGPPVPCPCPPHGLSQ AHPGKTFGPKNLHMVPSGGAQAPGPHK ANQQSWPSCPPVPRSRPPTFSHIAENPME RKSFAQGSAGNWKVKVSNPHWELQV FESPSRPCVKNGRAAGLVTGGFREG
4676	12727	A	557	584	827	FLFYLFIFFTGSHSVTRLECGDTIMARC SLNFPGSSDPPASASWVAGTAGVLYHT WLSFAFFRRDGVSRVARAGLQLLAW
4677	12728	A	5570	3	312	FFLNROQLALLLKLEYSGMIDHCKPQIS GAQVILPVSASWVARPTGVYHHA*LIFF KWGREVETESCYVAQAGLELLASSDPPT STSQRAWITGLSHCAWPA
4678	12729	A	5571	1	121	IFHVLKNCQTRSYLALMSFKNEGEIKMF SNIQKLKEFITDRSK/LQEMLKNAL*AERI YY
4679	12730	A	5572	2	228	FETGSHSIFWAGVQWYNHSSLQPRLPGL R*FSLSLPSSWDHRCPTPRPCNFSIFSRD GFSSC*SGWSQTLGLK
4680	12731	A	5573	1	1896	MVSQGCRSREMRDAHAGWDSPTALHM ARGLGRRVFSAPRHTEGGTPDGNHSLSP NQKMEKLTEKGCKQLRQGGLCVRVSDR TVRSVQETTATITLKGSLGTICRGRN LLTAEGFMPHASVCIQSKSGKVARNTVQ GFTA HGKAVLEAAVSASGPAGTWGCLR IKWPRSVS WLLKPERAATLVGHGCRKS GCPPGLGGS AKM/PPRHQSAAPAGRGR PCWGPEPTSGSLSNQQWLPGVALHAPPLP SAPLLGPPLLSRTVDTGPGSGGREVEATT CGRRLKDKDSEHAGAGSRHHQSQVTGS LGEERAVRAESPGEGPAEFLRRIQGA VQ TRAVTAGSSVEKINTKLETCDCDASEEE VLGGDNVETEERSVCVPEPVKMTLFEKR VFADIIRCLARWAPAATNRRDLVNTLIPG HGPSCSLVAF/APPSRPYP*PAARCW ASDFPERGKRLRPAHSSFPVPAPPCVPVQ SQSGPLPCTPRHFPLFPAPAFGICRGPR APGG/SKAVATQRPWWLYAPGTAPGGL PW*/AVPGHNKSIPPQPVSNLTETPLNAP QSSWAALGSKRLGQGC SHGFFAFSFTAD VCTNDDTLNANSLTEVLATEIKHDINLA NEGLAWDRGWDYQQKDMLSL

4681	12732	A	5574	1	475	FWKSPYSVQPRTEARAQGNKQKEFRET APGSSSKADTKSEHLWALLPSRRWGG QTQHPPLAREPQFLACGPMKDIRLADWS TPLLSNPS*KLP*ICQSCPLEQEGKQKA*D ARGVPSFPELQPPSGLTAQGGQTHRPHPD LRMTCGRTWHFFLAKTLH
4682	12733	A	5575	2	468	SRGILADPPRPGGQPDFLQP*PTRVAALS GLSNQDIDLGLHLMRRQPQVPAGPEAET AASRTALPCAVNPWTVLRATLPDLDCIQ TEACGMKPSAVSKFLVPRQYVPRLPFKV AVMAVVSTLRTVLSLTLTHSPPCRSL QPFVSFSIFWFGDK
4683	12734	B	5576	90	1686	XWWEPSFPQQRDSLKVTLQRAAFNP VAPTHSKDQHPMPSPFCHLSGPVPSRT TLATGRAAPHSSPLKSLVQGYAPWQTS MSCDYQPPRRQEHKETSRRNSEKQLQAP AQRPTPKANTSGRSLQEDLLPEAQGL SVPVCHPCPLLHAARLAVSAAAIRGLE VAEALVCAQKLLAACSSHSLITVWSRG KVKETGLPSTVQAVSELLQVLLCKQKAG GCTPDQGPHTSKVLTEASSLPRIARMCLL QPGPFSNIPLGATLTPAATAATPGPLL PCTKHGNPLGHGLTCHYPLAPLPLPPAP HVRFAALSCLERSAGCCLCTPSCRITTVG GSVGSCASELNHRACFSLPLMLGFQAPI ATHQWLFVSRNDKNTLDTPRSAGCDGA HRPRQEPAPDGPVLLCLEMPAPGSYPG GAPVSGHRQVHPQQWQVQHLGQSGGIR TGLGANCCKSHDSAYKKGGDVCFPGEM VPVHQLKGVQHPNCRGHWGTLVQQ KQPWTGSRGPTADQLHPKNSSLTLVFP R*
4684	12735	A	5577	171	1631	GLPQAGADSDPRTRPFLLLGGLPGLSPR PYP*PAARCWWASDFPERGKRLRPAHSS FPVPA/PPMRPRTVPVRAAPPHPPSFTSV PSTGIRHLRAEGW*TGQ*RNTPNKSRRR LSPLVTPGSCRSSPTQSPGPSGTTVEMPA RRWCAGATGPGATSP/SSLKVKETGLPST VQAVSELLQVLLCKQKAGGCTPDQGP TSKVLTEAS/SSAPHLQNVLAARSISDN IPLGTATLTPAATAATP/EASPLHQAWQ PS/TAMASPAITPWPHYPCQLRMSGLLP CPA*NAPQAAVSVPPEAE*RLAALWVH VLRN*TTGPASHCH*CSASKPPSPPTNGY SVSAMTRTPWILPDRLAVMVLTPGKKSQ PQM/RPIVLLCLEMPAPGSYPGGAPVS/ AA*AGTPPAVAGAASRAVGGHPHRPGC KLRQIP*FCIQEGWGRVFSRGNGPCRASD SQRGPAPKQVQGSGLDGTGATEAALDWE SGPHCRPAPP
4685	12736	A	5578	718	2209	IPSACFLVLLPSWWLVVAAHGSPLGRVA LDQAFQWTRVRGCSACGKGCAPAG/PQ AQRGSGRSWAWDAGP*RSVWGPLG*TO PAAAL*P*VSFFVAGKGLAPTTLVGTAI QSILOGLILSWNPGGEPAG*RNLDGAGG RACCPDEDDQIRGGAVLAEVT*QCSCSP MPDAAHHRHRVRVGVSGAAVCPQWEL GGHGGNARPDAGRGVLRSCRGTRNLLT AEGFMPHASVCIQSKSG/TSGTQHCPGV HCTWQSCPLPSAPLLGPPLSRTVDTGEE GHPVDASWTPSTPREPGRWAHCLPQRK P/PLGPAREASVPPAHSCTVAGEAPPVIS HFR/SPAPAFGICRGPRAGATEALPAPRA DAPVKAAP/PAHTGAAS/EPARHVRPFPT ATAPFTFSAVHKGSFSTSLQTLVIFCC VLMVAIPMGVRWHLTVVLWNLAVISR VPISVCALDLSFISVPCPLRCWCWWNRV SPKLASPGCSECDLQGMVRMVSSHFSV E

4686	12737	A	5579	2	354	LPSSWDYRRPLIFVFLVETGFNMLARM VSIS*PLDPPDLASRDEIIGVSHRAWLIL S**KGERKSTNVSHKEGLG*WSRATVLQ VYSVGFWVFPFQGCPCQSQSYFHNNTNM LFAF
4687	12738	A	558	442	626	VEEGGSEAGWALRIKINGVSPKL/VLQL LHFPQIFNGSFVKLNKASVNTLRIVEPYIT WST
4688	12739	A	5580	1	1263	MAEEQGRERDSVPKPSVFLHPLDGVGG AERLVLDAAALQARGCSVKIWTAHYD PGHCFAESRELPRCAGDWLPRGLGWG GRGAAYVVRMVFLALYVFLADEEF DVVVCDQVSACIPVFLARRRKKILFYC HFADLLLTKRDSFLKRLYRAPIDWIEEYT TGMADCILVNSQFTA AVFKETFKSLSHID PDVLYPSLNVTSFDSSCS*KAGMT*SPRG KNSWLLSINRYEREGKIWTLGTGKALV QLRGRLTSQDWERVHLIVAGGYDERVL ENVEHYQELKKMVQQSDLGQYVTFRLS FSDKQKISLLHSCCTCVLYTPSNEHFGIVP LEAMYMQCPVIAGNSGGPLESIDHSVTG FLCEPDVHFSEAIEKFIREPSLKATMGL AGRARVKEKFSPEAFTEQLRYVTKLLV
4689	12740	A	5581	200	705	LSQTL/TVLYPSLNVTSFDSVVPEKDDL VPKGGKFLLLSINRYERKKNLTALAL VQLRGRLTSQDWERVHLIVAGGYDERV LENVEHYQELKKMVQQSDLGQYVTFRLS FSDKQKISLL/RQLARVCFYTPRQ*GTL GIVPLGRPCYMAVPQFICCLIRVGPFSSSI
4690	12741	A	5582	1	259	ERGSRSIARLEC/SG/AISAHCFNRPPGSSD SSPSACRVAGITGRHHPQLFFVFLVEM GFHHVA*DGLKLL/NFMIHLPQPPKVLGL QV
4691	12742	A	5583	94	395	PIIITYFEFLNGYIISQKIKFSHHQLQKIDFL P*TWHLFLIEQR*NILMEGNQFSVTDDVK ILFSGKLYSHSKIQSMLL*LVTRE*CYMF NCNICLLSFSSLSVIINDLQNP
4692	12743	A	5584	3	270	FFEAGSHSGCPGWSESGAIIAHCSLDLPG SSNPTSAS*IAGTRSMHHHAHLIFVFLVE TGSPYVVQPSLKL/RVQAILPPRPPKVLG LQA
4693	12744	A	5585	13	775	YSVRGLVPAERRTPYPGSIVAPADGMVY ALEGMGPDTPAQAVRVYEP RRDCWLS LPSMPTPCYGASTFLHGKNIYVLGGRQG KLPVTAFAFDLEARTWTRHPSLPSRA FAGCAMAEGSVFLGGLQQPGAPQLYS RPHFVNTVEMFDLEHGSWT/IIAPQPAHE G*EGQTLWLGPLGATLWPLGALETSHVL WALLESFSLARRRWEALPAMPTARCSCS SLQAGPRLFVIGGVAQGPSQAVEALCLR DGV
4694	12745	A	5586	1	936	
4695	12746	A	5587	1	1023	
4696	12747	A	5588	3	345	LNLLMYFRDNVSFCHPGWSTVM*S*LA AASNSWVT*SSCFS/LPSSWD*S*LPPCP ANFFFF/CQ*RQNLIMSSRLVSNL/QPQV MLLPQPLKALGLYRVSHHASVKVFNVLI NM
4697	12748	A	5589	1	430	GDGVLLCRPG*STVALSQFTAISASWVK RSSCLNLPSSWDYRCAPPCPAKFCIFSRD GGFTMLARLVNS*PQMIHPPWPPKVPP LPACVWYFSMACNFLYTPSFFLRLFCQQ PKMEKAALCQGSPKTVKSCSQMFTFNF F
4698	12749	A	559	3	398	

4699	12750	A	5590	3	389	GVSPCWPGWS*TPDLK*STRLGFPRCWD YRLLEVDPCGTGHSYL*KDPPVLPAPAE CDYQGKEYALSSCCDKSYLLPDYRTKFL CCHPERGTWKLGTVGGCYAPIQSFGIAD EQAWLQHSGSAVYLC
4700	12751	A	5591	3	53	
4701	12752	A	5592	363	777	DMRPQLCSVDNHREQRAEFINIQHQFF FLRQSLTSVAQAGVQWCSLSSLQPLPTG FKPFSCLSLSSWDYRHMPPSLANFFCIF SRDRGFTMLARLVLS*PQ/CDPPALASQ NAGITGMSHHA WPTPTFSYLLNTQD
4702	12753	A	5593	3	85	FFFFLMLHNNVYLVHLFTISYKHFIIV LYKQQFKFTYVY/TFICLLVFQFQILLES FPFLKILL*SL
4703	12754	A	5594	1	281	FFAPETESYSVARLECSGTILVHCTLCL PGSSDSPASASQVAGTTGACHHTWLILVI LVEIGFHHVGQAGLG/IS*LQVIRPPWAP KVLGIH
4704	12755	A	5595	2	369	FFLRWCFALVAQAGVQWQDLGSLQPLP PGFKRFSCSLPSS*DYRCPTRLANF/SV FLVEMGFHHVSQAGLELLTSGDLTTLAS QSAGTTGVSSRAWPDLYLFSYIEKTSPF KFSIPFHEI
4705	12756	A	5596	432	1490	KKGCGKPGELCGCMPSSWKNAYCPTAQ QTAQEYLSSPCGSAAPCLP/DRASSSR VEASSLDSAPGTSAAGSPSPRPFGEYH HPGPGANNEPTPAESIVVPSWP*GCHSS VAVEKLSLAPGTPT/SDLPLDSSMNRKA PIPVFGLSASSLLPLKDARASETSSR*TH Q*FFGKDVH*TQNSLAQSLQHSSGPQLL WGKTGNSQSSFPQAG*HSRHEGCWRE PSHKPLEPHSLSQHHGTASSARIEVPPP HSLGHSPACAWRSSSPRPRPLAALPGC RRRRGAGSSHKAPDRSTARPGRCRRR GRRGARRGCGGSGRGPSSHSGPQRESAP PAGAHTRLQPLRSHSLH
4706	12757	A	5597	1	2163	MARMSFVIAACQLVLGLMTSLTSSIQ NSECPQLCVCEIRPWFTPQSTYREATTVD CNDLRLTRIPSNLSSDTQVLLQSNNAIK TVDELQQLFNLTELDQSNNFTNIKEVGL ANLTQLTTLHLEENQITEMTDYCLQDLS NLQELYNHNQISTISAHAFAGLKNLLRL HLNSNKLKVIDSRWFDSTPNLEILMIGEN PVIGILDMNFKPLANLRSVLAGMYLTDI PGNALVGLDSLESLSFYDNKLVKVPQLA LQKVPNLKFLDLNKNPIHKIQEGDFKNM LRLKELGINNMGELVSVDRYALDNLPEL TKLEATNPNKLSYIHLAFRSVPALESML LNNALNAIYQKTVESLPNLREISIHSP LRCD CVIHWINSNKTNIRFMEPLSMFCA MPPEYKGHQVKEVLIQDSSEQCLPMISH DSFPNRLNVDIGTTVFLDCRAMAEPEPEI YWVTPIGNKITVETLSDKYLSSEGTL SNIQIEDSGRYTCVAQNVQGADTRVATI KVNGTLLDGTQVLKIYVKQTESHSILVS WKVNSNVMSTNLKWSSATMKIDNPHIT YTARVPVDVHEYNLTHLQPDSTDYEVCLT VSNHQQTQKSCVNVTTKNAFAVDISD QETSTALAAVMGSMFAVISPASIAVSFP KRFRRKNYHFIKKVLWQKTSIPLNE LAPPLI*PLGKVDSEKDKDGSADTKPTQ VDTSRSYMMW

4707	12758	A	5598	50	824	SLLKPYYVRIFTKEKSYKCKEKGKHFHS CSRH*NHKIIHTGEKHYKCEECGKVFNH C*QLIAQKKIHAEKNSDFKECGKAFNNY YELTHQRFCAR*KQCKCNDTHYIYLWK DVTK*KP*STQGMIVIHICTWKDFKNI SLRVHKSFYTEEKHYKYKDCCNFTTYVT DFVVHRRYTER*PSNSCSNFIPF*IYIGK KPYNCNEYEKNCLKSTP*KTLV*GRARW LTLIIPAPWEAKAGGSRGQEIETTMKPCL Y
4708	12759	A	5599	1	2043	
4709	12760	A	56	939	1603	GHSANWWLGPENPALPTPELVSPPRGC RQSSRPSLRHHEEKAK*KSPQPTILRPPP APPTGSLQAPKGGARPPSRPRPPPPRPA PNPRLPPPPSPE/PGRSSCPAPPTTRTTPR VQSQTHRPPASSAYEKKDAARAPTATGR APRRPGLRPKSWMPEQEKEPPTDRSIDR TPVPSYQTTREGGRA/PRASSI*GPDSPAT RQDGSSGPHRSYRPGCVAR
4710	12761	A	560	1	960	IMATSATSPHAPGFAEGRCGYVEKKK RFCRMVVAAGKRFCGEHAGAMEEEDA RKRLCPLDPKHTVYEDQLAKHLKCNCS REKPKPDFYIQDINAGLRGETEIQEL/CL NSTLTDHIMSHPALHDALSDPINGDSAT KHLKQQASINLGNENLKLGP RR CFVEF GAGKGKLSHWVDIALKDAEKVHFILVE KVTTFRKVDGKHKRKNVFERLQIDIQH LCNLKIPVLRKLPVVGIGKHLGCMAT DLALRCLVETYAASFERNEEPLAKRIK NDKTEKEIYTLAKEGNEKNVPEKWNPV AGIVIALLCCHRCDW
4711	12762	A	5600	18	403	FCIFSGDGVSPCWPGWSRIPDLR*SACLS LPSSWDYRRPPPSANFF*FLVKTFGHH VGQAGLELLTSGDPPASASLSAGITGVSH CTRPYAFKQLNFHIDKSDYRLYRKL YLKATTMVFRYAFL
4712	12763	A	5601	2	497	ETESHVTVQAGVQWCDLGLSQPPPRLK RFSCLSLPSGWDYRHVPPHLANVCIF**I WCFTMFARLVFNSRRTPSDLITSAS*SAG ITGVSHRA/RLCIFYYFFVAEMVRMSCF VTQVGLEFVALSDLPWPVKVLGLQA* ANSAPVVFYCNSFFHSHLNAFPN
4713	12764	A	5602	3	303	LSCFPQATFFFFIF*DRVLLCPGRSTVVQ SQLTAALTSRAQSSCLSLPTKWDRHV PPYSAFFLVLDKSLALLPRLVLNSWAQ AILPPQPPKVLRLLA
4714	12765	A	5603	122	525	QFFFEIGSLVAQVGAQWR*STSPLQPW SPGFK*FSHLSLPESWEHRMPQGLDNFC NFVETGFRHVAQASIKLLGSSDLPALASQ SAGMTSMHAWPIVKNFVCIYYVPDIV LSMLSVK SINIHINHVRGLQ
4715	12766	A	5604	1	198	LTGRL/SKCEVSVWRFDVQLKDLKRWQ NHLLLSQQLACIVLTSAGIMDHKEMR*K HTGGKSLGFFF
4716	12767	A	5605	156	1047	VPAGEARVQWHDLSLQPPPPGSSDSP ASSSRVAGITGIKTNTICKKAQNVQLYG TPKPCQYCNIIAFIGNKCQRCTNSEKKY GPPYSCEQCKQQCAFDRKDDRKKVDGK LLCWLCTLSYKRVLQKTKEQRKHLSSS RAGHQEKEQYSRLSGGGHYNSQKTLSTS SIQNEIPKKKSKFESITNGDSFSPDLALD SPGTDHFVIAQLKEEVATLKKMLHQKD QMLEKEKKITELKADFQYQESQMRK MNQMEKTHKEVTEQLQAKNRELLKQA AALSKSKKSEKSGAITSP

4717	12768	A	5606	156	960	VPAGEARVQWHDLGSLQPPPPGSSDSP ASSSRVAGITGIKTNTICKKCAQNVQLYG TPKPCQYCNIAAFIGNKCQRCTNSEKKY GPPYSCEQCKQCAFDRKDDRKKVDGK LLCWLCTLSYKRVLQKTKEQRKHLSSSS RAGHQEKEQYSRLSGGGHYNSFSPDLAL DSPGTDHFVIAQLKEEVATLKKMLHQK DQMLEKEKKITELKADFQYQESQMRK MNQMEKTHKEVTEQLQAKNRELLKQA AALSKSKKSEKSGAITSP
4718	12769	A	5607	1	354	ETEFPSCCQAGVQ*HDLGSRQPPLPGSS DSPASASRVAGITGMHH*SRDVLIRILEL EEGLELCPHFSVRNLPKTGOILTLMLSLA PVKLAPQPKLSWMELTRHSRLWAALSG GGQV
4719	12770	A	5608	3	403	YIFSRDRVLPFCPGWSQTPGLKQSARLCL PKCWDYRREPPQLAED/SYFQFRASLKM TL*GIVSMV/PLLQKLLWMCKAQGNQAE EGTGVALPEREASSWSCLLQLPFPVDEP CSSFKRRESEKEPSPNGFPNLNI
4720	12771	A	5609	340	1015	VGSVEEFQGGERSVILISTVRSSQSFFVQL DLDFNLGFLKNPKRFNVAVTRAKALLI VGWPLLLGHDPDWKV*APPHSPS*WP QPLPRAGGSFLSACLSLS*SSDVSIPTASL LYL*VK*HPEVEQVQLRWDRVA*PPVS AGHSSVPHRFL/EFCKENGGYTGCFFPAK LDLQGGQNLQ/LWSKLSPTSGPHSH GLTSPREGERGERGPVFCWEPEWRNEL
4721	12772	A	561	111	349	SLDSDSGCKAYVGDEYLPGLDLHAQP SLLKEHEEEKMFTLKGNRPLAADVKNIIF FVRPRLELMDIAENVLSEDRRG
4722	12773	B	5610	769	809	GFPIIFHGVMGKDEREGNSPFFNPPEEAA TVTSYLKLLLAPSSKKGKARLIPRSVGI SPYRKQGALEDIKDFEGGFSKKNK AQERSVILISTVAKRPRALLQLDLDF*
4723	12774	A	5611	99	341	SELGTVAHTCNLILPSSGDYRRPSPHLAN F*FLVEMGFHHVGQSGVELLSSGDSLAL ASQSPGITGVSHRAQVPPPPFFF
4724	12775	A	5612	1	1795	MRQSHQLPLVGLLLFSFIPSOLCEICEVSE ENYIRLKPLLNTMIQSNYNRGTSVNVV LSLKLVGIIQITLMQKMIQIKYNVKSRL SDVSSGELALILALGVCRNAEENLIYDY HLIDKLENKFQAEIENMEAHNGTPLTNY YQLSLDVLALCLFNGNYSTAEVNVHFTP ENKNYYFGSQFSVDTGAMAVLALTCVK KSLINGQIKADEGSLKNISIYTKSLVEKIL SEKKENGLIGNTFSTGEAMQPSGVLPLN GCSTTLAVACSTGHRKCASRALENRCR SPAACKVTKNKRLSNCQTGQRKLRRCDN RMQCGVLDRIEQKEDISGTTSEIQIKWG VELHSVSRWRLGKVAMEMVQCQKAGY PERGDGVGAVAEGPNIKVAGGLRELETR KTALPENESSQEHAFTITLQHLVQGLAH SGYSVLKCLLNENRAMQKHGTVWTQQ IQSSAAEKSEKTMSWDRLGRTAHSWQ ACPVSLLKQAVEGAHQEEQCKRRDEM PGESDLVTMASGRDALLCGRCCQQA EELTITVPRLGEQREAPLPCSTPPGSTPPA AKVPRPSAAPDGPSS*SPGARRQVARPRR GQAPENK
4725	12776	A	5613	12	367	LGGASEATGASAAQPPPPPPAPRAPNPAP GPAPAQR*SALDPPLPGRAPRSFLKGPRP ATARPPG/WRLQSPLP*PESPPDTRGVRG EAPAPADPAAGPRKSKSDCLAAVIRCLC RAPR
4726	12777	C	5614	231	302	MNSFLVFFPLYVQMYMLRLNFCA*

4727	12778	A	5615	194	737	EGGVCLSWCGWFGPVCCDYTPPLPEPR DGCLC/PLPKMPPAPPMLPIQQSFQPFQE RPGSPVPETASPPAGN*ISHLSEGPNTQ WSPGFKPWGVCHL*/CGHVGVPLKPAP CPLE/CCPSGCVDSGAFFQKHSPSGSGPE TAAGPSHLNDNWQRLGFYELLSGIFCRA PNKCICYVSIFVLK
4728	12779	A	5616	2	360	PRVRDPRVRPRVRRRIYKPLRTRDELQ FLDKMDDPDY/WPAVDFFSGDVMHPVT NRPADKRSFIPSLVEKEKVSRMGHAIKM GWIQPRRPRDPTPSFYDLWAQEDPNAVL GRHKMHVPA
4729	12780	A	5617	1	2072	DSGSDSSEDDDEGEDGEDGALDDEGHS GIKKTTEEQVQASTPCPRTEMASARIGDE YAEDSSDEEDIRNTVGNVPLEWYDDFP VGYDLGRRYKPLRTRDELQFLDKM DDPDYWRTVQDPMTGRDLRLTDEQVAL VRLQSGQFGDVGFNPYEPVDFSSGDV MIHPVTNRPADKRSFIPSLVEKEKVSRM VHAIKMGWIQPRRPRDPTPSFYDLWAQ DPNAVLGRHKMHVPAPKLALPGHAESY NPPPEYLLSEEERLAWEQQEP*SERKLSF LPRKFPSLRAVPAYGRFIQERFERCLDLY LCPRQRKMRVNVDPEDLIPKLPRPRDLQ PFPTCQALVYRGHSDLVRLSVSPGGQW LVSGSDDGSLRLWEVATARCVRTVPVG GVVKSVAWNPSPAVCLVAAVEDSVLL LNPALGDRLVAGSTDQLLSAFVPPEEPPL QPARWLEASEEERQVGLRLRICHGKPV QVTWHGRGDYWPLVLAPRGHTGVLIH QLSRRRSQSPFCTHV*VHRVAFSPARPF LALVGPQRSVRL\YHLALRQELTKKLMP NCKWVCQPGGCNPAGDNVICGSYDSK LVWFDLSTKPYRMLRNH/HRRALLA VAFHPRYPLFASGSDD\GRVIVCHGMVY NDLLQNPLLVPVKVLKGHVLRDLGVL DVIFHPTQPVVWFSSGADGTIVRLFT
4730	12781	A	5618	1	214	QDSALLQLL*IIYPVYNLSPAGQGRDLF SCLLRHRLKLTSEGVRTQSALQAFKGP NAQTQWIYGHDPN
4731	12782	B	5619	58	280	IHCAISKIDIEKDIQAVMEETAILSTENKS EFLTDYFEEDPNSAMDKERRKSLKPK LLRLQRDIEKASKDKEX*
4732	12783	A	562	223	747	CIGKVYVWLGGVGWLQKSWGTPLFSPH PPGRPRSFAGHSPPQGILGVGLGGENRI LVIIFNLIYCTYLGQGLGEVEGEGSPLS APPTPFLRRFVCV\GPHPLPIPHCCLDVVL FFYRSPFPSSPSPPPHPLLPFVSCSFLG FCTTQLVYTVYTQPAKRKPNGKHFKKK KK
4733	12784	A	5620	2	785	HFNMRDPLTDCPYNKVYKNLKEFSQNG ENFCKQVTSVLQQRANLEISYAKGLQKL ASKLSKALQNTRKSCVSSAWAWASEGM KSTADLHQKLGAIELEAIKPTYQVLNV QEKRRKSLDNEVEKTANLVISNWNQQIK AKKKLMVSTQET*STFP*ESS/ARQSM TEKEKRKLLNKLTKSTEKLEKEDENYYQ KNMAGYSTRLK WENTLENCYQSIL/ESW RRKEFNFYAITLNQYSQHISLFGQTLTTC HTADSLCHQQD
4734	12785	B	5621	13	543	MFLAPIAVSVRRFFXVKASVYAYTMFFS TFYHACDQPGEAVLCILSYDTLQYCDFL GSGAAIWVTILCMARLKTVLKYAYRCG HRRQCYPTLWQRWAFYLLPGVFMA SVG IAIYTSMMTSDNYYYTHSIWHILLAGSA ALLPPPDQPAEPWACSQKFPCHYQICK NDREELYAVT*

4735	12786	A	5622	1	1798	MLCFYAGSCRHFRSGAPPVINPLGTSFPD DTAVQPSFQVGVPLSTTPRNASVNVSH PAPGDWFVAHLPPSSQKIELKGLAPTC AYVFQPELLVTRVVEISIMEPDVPLPQTL LSHPSYLKVFVPDYTRELLLELRDCVSN GSLGCPVRLTVGPVTLPSNFQKVLCTG APWPCRLLLPSPWDRWLQVTAESLVGP LGTVAFSAVAALTACRPRSVTVQPLLQS SQNQSFNASSGLLSPSPDHQDLGRSGRV DRSPFCLTNYPVTREDMDVVSVHFQPLD RVSVRVCSDTPSVMRLRLKPGMDSGGS LTISLRANKTEMNETVVVACVNACLAL PLALILSLNCTTAFFQGYPLSLA\GSRRRA NLIPYPETDNWYLSLQLMCPENAEDCE QAVGPRWEDHLCTWGALF*TDGPGYQG CSLLRRHSYLYASCSCKAGWRGWSCTD NSTAQTVAQQRAATLLTLNLNMF/LGP PSPSSVRRFFLVEASVYAYTMFFSTGCG VGGQDRAHGASPFYHACDQPGAEVLC ILSYDTLQYCDFLGSGAAIWVTLCMAR LKTIVLKYVLLGTLVIAMSLQLEPQGH VEHLGGPASLPS
4736	12787	A	5623	121	291	AFCFPKYELTINFKNFQLGVVTHACNPSI LGGRGGRIT*AQEANLANMAK\PCLLNK
4737	12788	A	5624	571	690	CQQGFSLQAYGPAQHAISMRFKAKY PDYEVTWANDGY
4738	12789	A	5625	130	943	
4739	12790	A	5626	45	473	GIPGRNMAVADLALIPDVIDSHGVFK YVLIPSLGLPAPGIRPAESKEIVRGYKW A\GHHADIYDKSVGATCRKQGLRTVSV WTAGPHLPTKSPGOERFT*YG*FHGPMV LPKNANFNLRKSKAKYPRLTEVTGLNR PAT
4740	12791	A	5627	3	348	TLRLTHLHTDTHQ/HSYSYTHTEIHPHT PHTETQTH*YTYALQ/PLRSHLIFLRQSRP QNGNAPLCEFSPPHSDVLQTLHLTSVV VKIPSTSLLMCRSSGGAQCRESLDQHEG VGP
4741	12792	A	5628	3	331	FFEMESPSV/SQAGV*GPNLGSLLQPPPPQ FKQFFCLSLPSSWDYRRTPPCANFWIF*\n KDGVSPPSWP*WSQSLDLGLFKFIYFFKET LILCTQSSTTTTTTKRTTRSSH
4742	12793	A	5629	3	336	SHSVAQAGVQWHNLGSLLQPPPPAFK*FS CLSLPSN*YRRP\PPHPADN*FLVETGFS HVGRAGLKLTSSEPPACASQSAGITSVS PPCRAHTFELIPLCPFLFWPLFCP
4743	12794	C	563	238	267	MQINSQMER*
4744	12795	A	5630	1	267	EMESCSVT\RECSGAILAHCNLCLLGSS DSPASAS*VAGITGMCHYTRPTFLFLVE MGFCHVGQAGLELLTQVIRPPRPPKVLG LQA
4745	12796	A	5631	3	521	FSFFFFPAFKMSNRGRGGSLLAGRKFPDF PLGPSGRLL*SNWCLTNTRSPKTL\YIHL *RGNQGDRLDQTSPLLGVDMMVMAHS/ VKKGKPELRKK\VHPSSGSFRQPKVHY*\n EKMGVFLFFEG*LQGVIVEPFKGRDGK VSCHLPQTQLGKGSFADFVAPGICIPMP WQPLH
4746	12797	A	5632	3	216	DRSHSVTQAGV/Q/WCDLSSLPPPPGLK *FLCLSLSSWDY\GAPPHQTNFYIFIRDG VSPYCPGWP*TPSLG
4747	12798	A	5633	1	412	IIRSKNI*YLEINPTKHITKTSKTLTKIEMK EDLN*WQENPCSWIGSVSIVKMSVLSKL IHTEIQCNRNKYPQIGLLLLPLLLFFLLDR LVLFKFTWKGTPRMAKAILRKS/SEDLT LTYINTYYKATVIKLVGAKPD

4748	12799	A	5634	276	2588	NKHFSFQTPKKS HQSLSFSKTTPRRISH TPQTPLYTPERLQKSPAKMTPTKQAAFK ESLKDSSSPGHDSPLDSKITPQKRHTQAG EGTSLETKTPRTPKRQGTQPPGFLPNCT WPHSVNSSPESPSCPAPPTSSTAQPRREC LTPIRDPLRTPPRAAAFMGTPQNQTHQQ PHVLAARAEPAQKLKDKAIKTPKRPG NSTVTSSPPVTPKKLFTSPLCDVSKKSPF RKSKIECPSPGELDQKEPQMSPSVAASLS CPVPSTPPELSQRATLDTVPPPPPSKV GK RCRKTSDP/MKEAS/SECQLDASATPGVG TADSPAAPTDSRDDQKGLSLSPQSPERR GYPGGLRSDWHASSPLLITSDTEHVTL SEAEHHGIGDLKSNVLSVEEGEGLRTAD AEKSSLSHPGIPSPSPSCGPGSPLMPSRDV HCTTDGRQCQASAQLDNLPASAWHSTD SASPQTYEVELEMQASGLPKLRKKIDPS SSLEAEPLSKEESSLGEESFLPALSMPRAS RSLSKPEPTYVSPPCPRLSHSTPGK/TGGK PTSARVPVPPT/SPSSTPSPFQTDGVPWTP SPKHSGKTTPDIIK/TGPGGRGRWAVAPA PLPGGARSVQPSWEPVTA*VRGQGRP* TQHPQDAHLGGF*ARGSVAPRPVASQE /PACLRPRKPLPGDSL*VPGRESCWPRK KLTVEPKGSVT*EKIQKLVVRKGLQVG VHGSYPRET KRCLFPAPHLPAVPCGAP SPASALQALTQSPLLFQGKTPSSQSKDPR
4749	12800	A	5635	29	268	ILINHFFLESCSVAQAAVQWHNLSLQPP PPGFK*FSYLSFLSS*DYKHAPPRPANFCI FSRDAVSPMLASWSQTPDLK
4750	12801	A	5636	2	118	
4751	12802	A	5637	1	262	ETDLALSARLECSGNTLAHRKLRLPGSR HSPASASQVGGTTGARTTPG*FFVFLVET GFHRVSQDGLDLL/NLVIHPWPVKVLGL QA
4752	12803	A	5638	3	309	IDTITTTTTTTTTFETESLSVTRELECSGAIL AHYKLRLPGSRHSPASASRVAGTTGARH HARLIF/VYFLVEMGFHHVSQDGLDLLTS *SGPPRPPKSLGLQA
4753	12804	B	5639	49	754	MAGAAPRLPWSRPHGSCGWWPMQPLQ GPGRRAVAAAWEVATPVFMPVGTQAT MKASRPNSWTLWVAASAWAYLPSGSK AGGTAAPDGVAGVSVRGDGGGLRFRS PYDGNETLLSPENPCSRMRWAPGVVT GALLQVNPLAGPVHAAHQRPDKQNLFA IIQVGWTOISGPPALKRFGSAWHSRAFLT HCCTVTTRPRCTTSRPQHRLPAELMSAV RTSIVEKRFPDSCGTSWAPX*
4754	12805	A	564	549	848	LFFPHSQSTKVFSYEQIMCVCVFLFFCF FVFPETGSHSVTRLGCSGVIMAHCSFNL PGSPDPSTASQVAGTTGVCHHAQLIFKF FVEPGQHTEIPSL
4755	12806	A	5640	3	906	TVKMAGAATQASLESAPRIMRLVAECRSR SRARAGELWLPHTVATPVFMPVGTQA TMKGITFEFLDALGCRICLGNTYHLGLR PGPELIQKANGHLHGMNWPNNLLTDSG GFQMVSLVSLSEVTEEGVRFRSPYDNE TLLSPEKSVQIQNALGSDIIMQLDDVVSS TVTGPRVEEAMYSIRWLDRCIAAHQRP DKQNLFAIIQGGDLADLRATCLEEMTKR DVPGFAIGGLSGGESKSQFWRMVALSTS RLPKDKPRYLMGVGYVVDREARALPVG SGFLGTPYPAWGGGIW GKRTQV

4756	12807	A	5641	379	677	EGLRP/ELQNLFAIIQGGDLADLRATWP* RDDQARNVPGFAIRGALSGE*EQSREF/C AGWLAAEHTLG*PKDKPRYLMGVGYAT DLVVCVALGCDMFDCVFPTRTARFGSA LVPTGELQLRKKVFEKDFGPIRPGCTFP HVPKAPARAFLHATAAQ*QHGPRTILT VHNMAIYQLQMSAVRTSIVEKRFDPFVR DFMGPMYGDPTLCPTWATDALASVGIT LG
4757	12808	A	5642	2	335	AGVQWPDLSLQPLPPGFKRFFHLGLPSS WDY/RVHEAPRPANFLAKFLVEMAFCHV GQAGLELLGSSDTPVLAFQSGITGESHLA WPVFNF*NGSFNVFSLRVINEHLALHL
4758	12809	A	5643	56	571	YYQNPPKKKLAASCSPLVQLVLSLKG EVLPLGETQHYFPLNRELRLTQHFLLL MPLSQ/QTSKAGTHARLIDPDYQGRTKF KIRNGKKILNGRRKEIAWNVGFSIT/PCLL WKVIGILEQSNMAIYWIHPRMKV*ASP PGKEQRPFEVTEGQRNMEWLEEERNG RCLP
4759	12810	A	5644	2	1085	
4760	12811	A	5645	387	533	RWSDYVERYMNSDTTSPELREHLA\QKP VFLPQGE*AMSICQQVHTVHD
4761	12812	A	5646	1	169	VFLVETGFRLLARLALNS*PCDPPASAS QSVGITGESHCARP GTILMKHRGQLCT
4762	12813	A	5647	2	369	FLRWSFTLVAQAGIQWCGVSSQLPPLPG FKQFFCLSLPSSWDYRCPPTNF*LLV EMGFHHVGQAGLELLTSGDLPASASQSA GITGISHRARP GTLFF*AVNGGGNQVFLF LRVLNGL
4763	12814	A	5648	1	340	FRPQSC*CPPADSRLFPATPEAVLSLLVK ASPPPELPRSPPEKPTGLSGGALG*QRFSR AARNRGDPLTRKNSKITSLLSFLQELTKA LEQKPDDAHILSSKSLLSHSSWELL
4764	12815	A	5649	2	660	RPPPAPAPGPQGPWPQGPYP*AESPPARS RTPHASQLPRCGPRPTADPSSAPSRRLRP TSRSRHCFFAAGS/PGTPPQPPSADVRRV PPFSPLSSRWW*PFPQSC*RPPADSR\RSR PPLRPSFRFL*KPARPQSSSVASREAKGPL VERQVDSVLAPRETASSFATRPCATLP GKVTANCKPPQKTSGQLLVRGLSRVA AYSSPFFGAPEIGEEMPI
4765	12816	A	565	178	375	ANFIAGVWSQSRFHALALHIIQGSKKV P*ANFIAGVWSQSRFHALALHIIQGSKK VPIVSKLENDTAARHELFIAEWRKQCSE KKAQAKGWRQW
4766	12817	C	5650	19	153	MKMTSNFLLFSSGIFSSTFQIHLDVPLEL QTQNTVMGCLMRIHP*
4767	12818	A	5651	2	306	ETKSCSVA*AGVQRRNHGSM*RQPPGSS NPPISASRVFG/ITGICRTHLIFLFFVETG SHYVAQGSS*TPEAQVIRLHQPPKL VFF YIFQLFLCFLVCY
4768	12819	A	5652	2	760	FFFFFSENDGHLDTGARFAPDRRHTGV GRTKDTQVGYRCHTAPARARGGWGED GCLAS*PGVRVKSRSVPGAPGRGGQC HNPSGFPT*PGGRHRKQPRPGARVLQAG GQGQAFPLAGWHLSPGYWLSTPWAC KGLGVVLSVTPLPRSPWVG*GLGSR/Q AVEGRAAQGRYLSFCPGTQW*WPPSAPI PTGT*SEVAHTKGVPGPGEPPAARGLRT LTLAVGPGLPGSRLVQHPKRYRALQALT SCFCSA
4769	12820	A	5653	1	834	

4770	12821	A	5654	674	1268	PRDLPASASQSAGITGVSHRLRFYFDHQ DVAPECGAYFFHELAKERKRGVE**NTL LAKMVSIS*PRDLPASASQSAGITGVSHR LRFYFDHQDVAPECGAYFFHELAKER KGVRLKMQNQRRGGPAVFQDILKPGQ DEWGKLEAMEAAMAPGKNLNQSLLD LHALGSAPTDPHLCDFLESHFRDEEVTF MPRKSADLHAAGEAASLGGVSLNVMK GASLHALCLRLNLSFGPGVATLCGERVV HKNNRASALRKCIFWP
4771	12822	A	5655	2	612	RYDFFFFFFFVTESSRG*LQSQAGVQ LRDLGSLQAPPPRFTFSCFASPSSWDYR RPPRPANFFLYFYS/MRRGFTVLARMVS IS*PRHLPALASQRAGVTGLSHCTRLFFF* WMESPSVTQAGIQWHDLGSLQPMPPQF R*FSWLSLPSSWDYRRPPRPADFACTFSR DGVSPC*PGWSRSPDLVIHPPWPKVLG LQA
4772	12823	A	5656	140	261	RAEPPLANHILFF*DRVSLCRPGWTAM A*TWLTVASTSRAQAVLPPSPNS*DY RHVSPHPLIFVFSFLIMLSRMVSNWAQ GILLPWSPKVLELQA
4773	12824	A	5657	79	358	AGVKWGDGSL/QPPPPRFKRFCSLSLPS SWGVRHAPP*PG*FSVFLVKTGFLHVGQ AGLELLTSGDLPVSASQSAGITGMSHCA WPTKALISK
4774	12825	A	5658	2	350	SQVDR*QSEPIRICREDHMERLQAFDA NSRKQEAWEKEKAKELEEWYARQDEQ LQKTKANNRVADEAFYKQPFADVIGYV EEAFVNDIDESSPGTEWERVARLCDFNP KSLD
4775	12826	A	5659	3	752	HRCGVGGSVGFCLTVGVRAVQLPAMAE LDPFGAPAGAPGGPALNGVAGAGEED PAAFLAQQESEIAGIENDEAFAILDGG PGPQPHGEPPGGPDVAVDGMNGEYYQE SNGPTDSYAAISQVDRLOSEPESIRKWRE EQMERLEALDANSRKQEAWEKEKAIN LEEWYARQDEQLQNTKANNRVADEAF YKQPFADVIGYVYVAKLIPFSTSDSFYFC LELMLLLCHKLLCFLNYFKLALWGLPKN
4776	12827	A	566	656	874	
4777	12828	A	5660	1	348	NSLGEANALGNQ/QPITQNVCPFLAMQ APGMAPSPSFIMNTLEVRKAFKRFPWM SAPIQVGLVGFCVLFATPLCCALFPQKS SMSVTSLEAELQA*DPKRAHPLELRRVY FNKGL
4778	12829	A	5661	3	430	LRQSL/DSVAQAGVHWRDLGSR*APPPG FTPSSCLSLPSSWDYWHPPRPVFLYF* ERRGFTVLARMVSIS*RRDPASAPQSAG IIGM/SHRARQILFFIHIFSTVSAGINES*V CFYCIILEVPSKEGILES*CISEAAH
4779	12830	A	5662	3	756	GAISAHNRNRLGSSDSPASASQEHWGT ETLAH*RSQLTATSASWVQVILLPQPPKN TGAQKHWPTEGEAKEHCVSDDSESTLK AGGQHRKQGGNSSSGAREPAPNILNSR RSWWTLVAKAAAVTVIRVILMAAILRG TLAKEVNWWVLDLTDKNEAADPRAR HKDSPSPHQTPQPSWLHSVDPPTGPQVE LPASPTMCAGTSQPLVSRWDWSPWSRK RHIIFAPSSHNYAGESFPGIYDAIFDIEN KANSRLAWKEVKKHISIAAFTIQAAGT LKEVL

4780	12831	A	5663	2	773	LANFCIFSRDGVSP*WSGWSRTPDLR*ST RVGLPKC*DYRREPPHPPGLLPVFSSHFA FGLFQRRRLRFVCFFA/FLRQSLALVTQA GVQ/WHDLGSLQPPPPGFK*FSCLSLLSG WNYRCVPPRQANFCIF/M*RRDFTMLAR LVSNS*PQ/CDPPTSASQSAGITGVSH/H/A RLAFVS/CYTHHTHTHTLA*IPFSPVFP NSLSPPLQQGFCPHHCTELTSYLIKITNPV HVIRPNGHSALCILVQVSAPLHWSLPLE
4781	12832	A	5664	2	415	LDPGSLAGFTSYIQFMYDEFVEEYEPTK ADSYRKK/VAQDGEEVQIYIINTAGQEDY TAIKDNYFHCVFSITEMESFAATVDFKEQ /ILRVKKDENIPFLLVGNKSDLEDKRQVSI EEAKNRAD*WNVITYVETSPKT*AN
4782	12833	B	5665	151	1312	MMGGRLLTGGIPGEAAVWGCSRSTAP SVFPPPPAAAAAAAVSSGNLRLHPGQV PRVLSREGGLAPRRGCPKSGGSESTR VPRAGPRGESTGDRDPAPPPGPPSSSHHF SPLRIERKADKPPENSGESSHDVASREQP LVLEAHFRWAILLACHSMPTVGRKQV NNEIKTEIKKFFETSENKDTTYQNLWDT AKISFFPDFSYNFFMPISVLDAGGGSETA KHHHQDVHEIQPHIEPQISLGSFEHPIFGS CTIKEGTYRKR/VLDGEEVQIGILETAGQ EDYAAIRDNYFRSREGFLCVFSITEMESF AATADFREQILRVKEDENVPFLLVGNKS DLEDKRPSVKEAKNRADQWNVNYVE TSAKTQLMLTRHKPGTSSQX*
4783	12834	A	5666	3	955	LLLLLLLLLLLLQPPRLPRHPSDSSFDRSR RGAFQATRTEYPPGGATQPRLEPSGRR TGSRCFFLILWRKLRHKMAANKPKGQ NSLALHKVIMGGSGGVGKSALTQFMY DEFVEDYEPTKADSYRKKVVLDGEEVQI DILDTAGQEDYAAIRDNYFRSGEGFLCV FSITEMESFAATADFREQILRVKEDENVP FLLVGNKSDLEDKRQVSVEEAKNRAEQ WNVNYVETSAKTRANVD/KEWPFLKTR WWNTCKYISSHCPRPAPVSRKTAHWAE VFFDLMREIRARKMEDSKEKNGKKKRK SLAKRIRERCCIL
4784	12835	A	5667	1	635	MAANKPKGQNSLALHKVIMVSGGGVG KSALT/QFMYDEFVED*EPTKADSSRK RVVLDGEEVQIGYPLDTAGQEDYAAI RDNYFRSGEGFLCVFSITEMESFAATAE FREQILRVKEDENVPFLLVGNKSDLEDK R/QVFSRKQKQKNRAEQWNVNYVETSAK TRANVDKVVFFDLMREIRARKMEDYIYL NGTKNTRKLAERIREGGCIL
4785	12836	A	5668	2	178	WGFTMLARLVLS*SQVIHPPWLPKVLG LQALGSGSLHRSFFISVKGSSGFTAPSRRL
4786	12837	A	5669	208	339	RGQRLPVSRKWLLGTEEAWALR*STRLS LPCWCDYRHEPPCPAH
4787	12838	A	567	718	971	
4788	12839	A	5670	73	269	DKIFFFFF*DRVSLCRPGWSSVARSRLTA TSASQFKQFCLSRPSSWDYRHVPPRPA NFCIFSRDR/SFTMLVRLVLNS*PQVIHLP RPPKVLGLQA
4789	12840	A	5671	1	586	KKPYECKECGKAFSSGSNFTQHQRHTG EKPYECKECCNAFSQSSQLIKHQRHTGE KPYECKECCAFRSGSDLTRHQRHTGE KPYECKICGKAYSQSSQLISHHRIHTSEK PYEYRECGKNFNYPQLIQHQLYW**N RIYEMCREAFNYGSKQNLSC**FL*IE*C/ SKHFICGLQLIQPGKNNVGEILYE

4790	12841	A	5672	2	355	LFLSFLFFSFFFFFETGPHSVAQAVVQWL NHGSLQPLSGFKQSFRLRLLSG*DYRC TPLRLASF*FFVEMGCHYVAQAGLQLL DSGDLPASASQRAGITDVSPCIWPPMSC YVKRT
4791	12842	A	5673	921	1086	TQPWYRHGGGGPKTLRQRSWSPCQAYH VPHACPSHHKLNLSRPRPWCPNATNML LSLKALQPPTLLSPLP*QVCRQGKNPPKQ RCRGP GATHHIPVHLWHS GWPLLHTLPA RISAVQPSFFPKETLGQAE LQNRWVPL GPGKQVLRERPLSHQREKREQLTPRLL ARRPQAGEAAAARRQGKGTAEGERG**D GPSKPSLVRARVRKRAGPKQGPSASA*P GPSTPNPPTTQGSHPREQAPAPTPMSS EENVLSSQQTARP/RPSPGTGMGVGVLK PFVSVPGALAKLTMCPMHVLHITKTCPA AQGHGVHRMPQTCC
4792	12843	A	5674	2	70	
4793	12844	A	5675	2	118	
4794	12845	A	5676	446	756	ISFFLSFFLSFFFFFEAESRSFTQIGVCSGTI SAHCKLCLPGSHSPASAS*VAGTTGAR HHTRLIFLYF**KTGFHRFSRDGLDLL/NL VIRPPRPKVLGLQA
4795	12846	A	5677	2	276	LRWSFSLVVQAGVQWCDLGS LQPPSGF K*LSCLSLPSSWDYRSAPPCANFVFLVE TGFLHVQQA\CLELLTSSDLSTSAS\QSAG ITREQ
4796	12847	A	5678	60	235	VRVLQIYHSLRLPGSHHPPRGDRLOQGRG FLTACQPC*STYC*TFPPGVLGNTGRDLL L
4797	12848	A	5679	1	2059	MSSQEVTFEQRPEGDEGGAVELSRQQTQ QERRRQLGQTQLMYKWAKPKICSEDL GAVKLPASGVKTHCPPCNPFFKTNNST CQPCPYGSYNGSDCTRC PAGTEPAVG EYKWWNTLPTNMG/TRPFSVGSTSSIR/C MTGWEVAGDHIYTAAGASDNDFMILT VVPGRFPQSV MADTENKEVARITFVE TLC SVNCELYFMVG VNSRTNTPVETWK GSKGRQAYTYIIEENTTTSYTCAFQRTTF HEASRKYTNDAAEIYSIICHPCY*MPWAS YAGPCAQKASEEGSSCTSCPAGYYIDRD SGTCHSCPPNTILKAHQPYGVQACVPCG PGTKNNKIHS LCYNDCTFSRNTPTRTFN YNFSALANTVTLAGGPSFTSKGLKYFHH FTLSLCGNQGRKMSVCTDNVTDLRPEG ESGFSKSITAYVCQAVIIPPEVTGYKAGV SSQPVS LADRLIGVTTDMTLDGITS PAEL FHLESLGIPDVIFFYRSNDVTQSCSSGRST TIRVRCSPQKTVPGSLLLPGTCS DGTCDG CNHFLWESAAACPLCSVADYHAIVSSC VAGIQKTTYVWREPKLCSGGISLPEQRV TICKTIDFWLKVGISAGTCTAILLTVLTC YFWKKNQKLEYKYSKLVMNATLKDCD LPAADTCAIMEGEDVEDDLILTSKKSLLG EDQIILQEDS
4798	12849	A	568	480	683	
4799	12850	A	5680	1	1098	
4800	12851	A	5681	143	571	
4801	12852	A	5682	3	355	FEIGSCSITQAGVQRHDLCSPLPPPPGFK QSPRPSLPSS*DHRCAPPCPASFCIF**RQ GFHHVGGAGLELLTSGDPPALASQSAGI TGVSHQAWPPFGFLDRTL SIVSQKTNTN RP
4802	12853	A	5683	1	2472	RYDLALWPRLECSGAITARC NLKLLGSS NSPTSTSCI/C*GYRLIFFKFFVD TGSCYV AQAGFKLPASSDPPPKMLRYRPA GHHA R/LCLTVNRTNVP

4803	12854	A	5684	5	298	TGSRVAQAGVQ*H/DYQGSLOPPPPRP M*SSHLSLPRNWDYSHTAPHPAKLFFFL DTGSHYVAQAGLKLGGSDPSTSASQSA GITGMSHRIQPHISF
4804	12855	A	5685	9	320	FIYLF/RDGVLLCCPGQSAVAFRLT VTS T/FL*SPDGELLTL*STRLGLLKWWDYKG EPPRPVFLFCFLNV**RCSLAMLSRLVLN S*AQAIFLPQPSKVLGLQG
4805	12856	A	5686	2	438	FFFFSRLNFEFYNNKPFCTNPGRGPPR VGPPFAPRRGAFSLPQGGPF*SLFSPRPN P/SGPLVRPGLPPTGALPCSVR*VDRSPLP YMVSPGPPGGLRGAGPGPVHPRGPEAP PRARGRGREGGPAESVTRFPWQLRGGH FQP
4806	12857	A	5687	243	377	
4807	12858	A	5688	1	867	
4808	12859	A	5689	1	874	TVLAFADGCGVLAHGRSRSYGR LGRRP YSREPLWSRGPGFTMSDEEARQSGGSS QAGAVTVSDVQELMRRKEIEIAQIKAN YDVLESQKGIGMNEPLVDCEGYPRSDV DLYQVRTARHNIICLQNDHKA VMKQVE EVALHQLHARDMEKQA\RDMA\EAHKEA MSRKLQSESQGP PRAFAKVNSISPG\SP ASIALQVDD\EIVGVSGSVNTQNFQSLH NIGSVVQHS/EGGPGTHHPTFCLYEFDYS RDLI*KPLNVTVIRRGKHLRLVPTRW AGKGLLG CNIIPLQR
4809	12860	A	569	811	1481	GNGILLMVHHHCDAGTVIMRADRFIPGE DQKNRVLVNTVLVRISRAVDGKHL SAGI RHTVFRICHNACTQHRGLFRGFNVFGEF LRFAFYILIVKENADQCAGFVGIIELGEID RVMQALPDVEQAVTHACVINQAAATGG DARQLVGYLVSQSGFNINGNRHLTTTN PVGFPA DK*GFPLMLPRVSGRNQHRIS/R VYLPCTATTLLRPGNGPPSPVRPRR
4810	12861	A	5690	30	512	TPVRDMAEAEHKEA\MSRKLQSESQGP RAFAKMNSIEPRLPQPSIAGLQVDDEIVE FGSVN/TPQDFQSLQ\NNGNVVQ\HSEGK PPEC DQ*SARGEKH\QLKLV PKNAGPGK GALLGCNIIPSAKDELSPRGNSKQEKHPS PCPRTWVLGDFPTCPSSPLKA
4811	12862	A	5691	945	1358	KKQNFYTVHGFSCCLGRGKGQDRDGW ESRDGRFLSRSLTFPQFAIIRLVGQKEFS MLPKSFTLQILPRGSLSLDPQEQLSK*S MPHRAVQSPSRHALGNPKTAREGSAPRS PLTGRPRPPVAAG*CRACRGAPQVARPP QGDQHRGFRGAHSDWRVWRGWASPSL LPRSSSSSGIANQASPVPEPESGERS/RPAL GGRSGSSPCRRP/PPKPPWRGAIGS*SGT WRRWLAGWRTRRPAPG CARPARPGPP SWPSRPQTGLAAGLSGAPSVPSRRCTP RRSRPPLPARWTPPGAPACRRRPWS*SP GSTTAA
4812	12863	A	5692	3	316	FFFFFLRQSL/DSVAQAGA QGHNPGLQA PPPRFTFPSRLSLPSSWDHRRPPPCPTNFS AFPVETGFITVLARMVSIS*PCDLLTSASQ SAGTTGTSHRARPIIFK
4813	12864	A	5693	2	769	LAIYKHAGGVFSFILLQTLNTYGPQDQ KGSVLAYWRLPGLCIIYLVKQSAKDFFS YYDINRQSVSKL\QNV EQLPPDEIKELRQ TITMPAGVDKSSTDQYVQAGRRLGKVI QQSRLNCFPLVSYIIET\CLFILWRHLEY L\LHCMPD\SQSLFASR\TLF*KQKDCQ GFPSQETQS*DF*KVGLAYSEANHGF*T QLSGLMPINGFLENHYPKRNFLDIEGL/YI SKVRFFGYSFIALVRRIRGLLRISRN

4814	12865	A	5694	189	424	TLPISIYQSSPSGFHNYQFLASGVGATLPI TPHPTS/ELPYRVSPSPSPRPPS*FSRTF QPP/V/PGPAH*PPDEIVEPG
4815	12866	A	5695	243	1660	AEPDTSPI*TPGQSGSS*GNTS/EPWTVTP PGLKMQRVLCCTL*PP/RRLPVCRPAA G*TRLDRA*ESGHPGPAVPREATGVPGA LPAQASVRSIWPALATCVATTVTST/DA EVARQG/ICPAPHPAYPPA*PALCCPARA DPRGRVLQ**ADAVPGPPAI*AVHRAVS HPGGAQCPHNPPAPQARVPRETCLPAL QLAAPVLRGAGATAASAPTEEEEEACLE EEEEEDSDEEDQSRGKDSEAWVPDSEE RLILREEFTSRMHQRFLDGKDGDFDYST VDDNPDFDNLDIVARDEEERYFDEEEPE DAPSPELDGD*WPPFPPPAPSPSPTRQLI PGLSDPFSRGTS/AAVPHNPHTPPSHWV *SHLRQPPPLFLGFPFSSLPPCLPLSFLV SVWASFCFLFSFCLSPYRSLFPVLWLAV SPFLPLSLCLRLCLHRRAQGESPLAGGQ LAGPFVAGSGQFGSGADP
4816	12867	A	5696	7	558	GWLDLGLTKCVC*NAEVPCEWVRLMC MSVCASK/CGGGCGCLC/MASGHCECLG MCWSL*ACVFLSKNECLCVSLGTCQCL CLCVPVSHHLCIRVAHAASLCAMVCQC LCVDGWPMSPDPRQGRPGWLDPAHLPSG SLALWVRVTEAFCGLKTGCSGSALRVA GGLPSLLPFRLVKRTPGGQGA
4817	12868	A	5697	272	1146	GFLGLEGLSSSPQVAWATVPLWAQLQ GGLAGSCLGQILAPGPSEARDWWASLA GP*ERVEGADRPWRFLSTPEALVLAAG R/SKARASDPGRSSTLSLLHVLKVEKRR VNLPRVLSMPPVAGTACHAYDREVHLR CELSPGYYLAVPSTFLKDAPGEFLLRVFS TGRVLSAIRAVAKNTTPGAALPAGEWG TGPIPG/CSWKFGQTAGGHKNFASYPTN P/CVPLFGSPKGPGRPCVRITLHQHCRAIS DTEFHPIGFHIFQVPEGGRSQDAPLLLQ DPLLSCVPHR/TPRR
4818	12869	A	5698	281	535	
4819	12870	A	5699	1	1014	
4820	12871	A	57	1	1513	
4821	12872	A	570	961	1627	LPHPAVAVIQNVRSRGRFHGSPTLVVIPG NPRHSRTITLIKLLHGIIVIGRVKFORHPG CGQAKFIFFTLRQNKPNVVSSTGRPKG VMVGQTAIVNRLLWMQNHYPITGEDV VAQKTPCSFDVSVWEFFWPFIAGAKLV MAEPEAHRDPLAMQQFFAEYGVTTTHF VPSMLAAFVASLTPQTARQSCATLKQVF VADLCREWQQLTGAPLHNGLCVFLMR
4822	12873	A	5700	155	2916	QKKAAGVLPKGFYGTVPFWQRAGQQFQ TDKAKGLTFLGGKAVHLS*/HLEREQPPR FAQPGTYASRWKALEEMEKQREQVDR NIREAKEKLEAEMEAARHEHQLMLMRQ DPGLALVSCMQGQSMRSRSPKKVFKHL YELNLTKLQSLGSRSLRWKDSPPFWGEE AGGKRPLVSLALHRSPSLLLLFVPKHPS KGRPDCTVQRSPKPTKSQLLDLRECISI HVGQAGVQIGNACWELCYCLEHGIQPDG QMPSD

4823	12874	A	5701	37	1542	PREPTPPA/PPRLQRTTRTRRCGFTIDIKSF LKPGEKTYTQRCRLFVGNLPTDITEEDF KRLFERYGEPSEVFNRDRGFGFIRLAESQ NPWAEIAKAELGRAPFLKSRPLRICFRL HMGAAFDCSRNLFSLLFFQLSCLEQAFS QFGSVEKAGVVVDDRGRPTGKIGFVEF ASKNLPA TKRLWKRCDDGAFLLTTTPR PSPLWKPMEQFDDDEDGLAQRLLMHKTQ QYHKEVEQPPRFCSTWGHKFEYQSR WKA\LDMEKQQREQVDRNIREAKEKL EAEMEAARHEHQLMLMRQDLMRQEE LRLEELR\NQKLQKRKQIQLRHEEHRR REVEDMIRHQKQEGLRQEQEGFKPNYM ENREQEMRMGDMGPRGAINMGDAFSPA PAGNQGPPPMGMNMNNRATIPGPPMG PGPAHGTRRSRKYGNSQ*COIMEQCTND RFPQGPSPQMGSPMGSRTRF*NPLKHPM SGVGPVSGGPGGFGRGSP\GGNFEGPNN RRRY
4824	12875	A	5702	81	334	HNVHC*VPCGEVGSVIHCWWNGDNLI* PS*KVSWKYESRAFKTSRPLDPTPLLLGI QSK*/YNKGHKDLDIRILITALFVVTCKL
4825	12876	A	5703	3	448	WGPEP*/PTRPTLDEGPGCGCSPSLP MGPPRGRGPPTSMSLLCRWPGVPLGSP GCPPRARVKLFPHPGPDVSTSPWAGHG AHQDP*GPVSGSESP/PPAGHWAPPASTS SPKIQAGL*PE\GMRTAQPPSAVGSPOG SFRHKEGWG
4826	12877	A	5704	1	206	GSL*SPSPRFKRFSCSLSSWDYKHVPP HLANFCIF*RDWVSPCWLGWSRTPDH LSWPPKVLGLPS
4827	12878	A	5705	32	401	AFPDKLPWNFRLCQVNRGISEWAGMS EMGMSDIQLSVGKLVAR/CWLQAEL*G* QFTKQER/CPSLTRSRWHGQPREQAER PFLCAPPEGAPIGFLR*HHLRVQLAMAWI KFKMLGQSPLPYI
4828	12879	A	5706	252	415	PFCRPPRADSVTKQER/CPSLTWIRWHGQ PQQGQAERPFLRAPPEGASTGFLRQHH
4829	12880	A	5707	2	164	FFLYLFLFLRWSL/DSVIQAGVQWHDNI CSLQPLPPGFK*FSDCSTVLQPGRQSETG LKYFFITV*EMESCSVIQAGVQWHDNLF PATASWVQVILRLHCTPAWATE
4830	12881	A	5708	1334	1706	VRPHEGARAGPGGRGRGDPGLGARALP QPRVAVAGAACQPPSRLRHAGHRGPMV HAVGGSTFLGFRQ*LSSHSTRQCPSRD SVWGLQPHISLLHCPSRGSP*GPHPCHRL LPGHPGISIHL
4831	12882	A	5709	57	376	KRGSLSGCPRPRVQW/RKTLAQLOPSKL PGLK*TFP/CLSLLK*TGHTCAPLCPNFF VFLTYLIEMGLTMLPRLVSYFWPQVFP SLASQSTGITGVSHHALAWWSMQ
4832	12883	A	571	803	1403	FNRRILKINGLTREQTSGVQQQIRQALSA LPLPVNRLEEDNCREAWRKCAWLKD IESARLQHNQAYTEAMLTEYADFFRQVE SSPLNPAQARAVVNGEHSLLVLAGAGSG KTSVLVARAGWLLARGEASPEQILLAGL VAKPLKRWTSGFANGYIPKTLPHARFMR /*ALHIIQQGSKKVPIVSKLENDTACRHEL FIA
4833	12884	A	5710	9	264	PCPPNTIN/CPLGLRLPC/PHLCPSLCLGK VGGP*KVPQTPSLGETELEQKKPPVPM SGWTGGRNGGWEKSLRGKERRVFSQEG FP

4834	12885	A	5711	124	770	QYFPTATHGNVKKSLLSGKASLKRHRV CCSCLFYIVQKQPKLNKTLFRQSYICDQT TFRKSKGIINIKFIFFFFEMESRSVAQAGM QWRNLGSLQ/PPPPGFMPLSCLSLSSWD YKRPPPCPANFFVFLVETGFTVLARMVSI S*PCDLPASTSQSAGITDVSHHAWHIKFK PEVTWRERGREEHVDRHIFRLDIRFTDT HFIKKELMRSDTL
4835	12886	A	5712	2	232	CLSLLSS*YYGRMSRPNANF*FLVETGFH HIGEAGLELLTLGDPPASASQGAGITGVS QRGQSLFAFLMSSTSFCK
4836	12887	A	5713	1	242	QAGVQWHDLGSLQPPLPGLKQFSCSLP SSWDYRRVPPRLANFC/DFLVETEFHHV GQADLELRTSGNLPTSASQSAGITGVSH HA*PKVLGLQV
4837	12888	A	5714	1	133	ERLRYFRVEHLDQRLKAAENKFSYCLM TWLKCWFWCLEKFIKFLNRNAYIMAIY GTNFCTSARNAFFLLMRNIIRVAVLKDV TDFLFLGKLLIVGSGVILAFFFFTHIRI VQDTAPPLNYYWVPILTIVIGSYLIAHGF FSVYGMCVDTLFLCFLEDLERNDGSAER PYFMSSTLKKLLNKTNKKAES*RLRYF RVEHLDQRLKAAENKFSYVPHDLAQMR LLVPGEVHQIP
4838	12889	B	5715	166	969	MGSACIKVTKYFLFLNLIFFILGAVILGF GVWILADKSSSISVLQTSSSSLRMGAYVF IGVGAVTMLMGFLGCIGAVNEVRCLLGL YFAFLLLILIAQVTAGALFYFNMGKLLKQ EMGGIVTELIRDYNSREDSLQDAWDYV QAQVKCCGWVSFYNWTDNAELMNRPE VTYPCSEVKGEEDNSLSVRKGFCEAPG NRTQSGNHPEDWPVYQEGCMEKVQAW LQENLGILGVGVGVAHELLGMVLSICLC RHVHSEDYSKVPKY*
4839	12890	C	5716	300	347	MIHLPRPPKVLGLQA*
4840	12891	A	5717	316	797	APALPQPTGLAASSHMVQVPLWICKLS HSKSRNSPQLFF*VFQFLRRSL/SSVPQAG VQ*HDLSSLQPP/PPGFTPFSCSLPSSWD YRCPPRPAKFFLYF**RRGFTMLARMV SIS*PRDPPASASQSAGITGVSHRARPPPP QFFIQLPLYNIHTLEGR
4841	12892	A	5718	2	519	WHPQSDVQAEVQWRDLGLLQSSVPPGF TLFSCSLSSWDYRRPPRPG*FLYF**R RGFTVLARMVSIS*LHDPPALASQSAGIT GVSHRTRPGADL*PRVQKPRASLGG*NH MCNMKSLPTGQTRLNKGRRLGHPFDHW RWKETPGL*CFHGNFCGALKAGRAHLD GQGRR
4842	12893	A	5719	1	663	
4843	12894	A	572	3	1642	
4844	12895	A	5720	1	1561	MATSTGRWLLRLALFGFLWEASGGLD SGASRDDDLLPYPRARARLPRDCTVR AGNREHESWPPPPATPGAGGLAVRTFVS HFRDRAVAGHLTRAPELRTFSVLEPGG PGGCAARRRATVEETARAADCRAVQNG GFFRMNSGECLGNVVSDERRVSSSGGLQ NAQFGIRRDGTLVTGYLSEEVLDTENPF VQLLSGVVWLIRNGSIYINESQATECDET QETGSFSKFVNVISARTAIGHDRKGQLV LFHADGHTEQRGINLWEMAEFLKQDV VNAINLDGGGSATFVLNGTLASYPDSH CQDNMWRCPRQVSTVVCVHEPRCQPPD CHGHGTCV\DGHCQCTGHFWRGPGCDE LDCGPS*LAAQHGLCNGSTGLSAVDAG WITGSNCSEECPLGWHGPGCQRPCKCEH HPCDPKTGNCSVSRVKQCLQPPEATLR AGELSFTRTAWLALTLALAFLLISIAA NLSLLSRAERNRRLHGDYAYHPLQEM

						NGEPLAAEKEQPGGAHNPFKD
4845	12896	A	5721	1119	2008	ALHPPAQGELFCDYFKDPSWSEGPQSPP LTRLAPHPQTQCTELSGGRRGSAVLEEC VPTPASAHLAASPAEAGTAGVWR*RHH F/HSTGLLGPR*LSMSLLMS*CKAGRCPP GEDCPRPLPGCSLSPLERKLCFSSA*GPA SFLGGLTAKASGCSLSLRP/SHHIQGHGL WEKL*VPARRAGGGVCFKSA/PHLQSL** KPSSKASKREG*Q*TLPSATIGELPFK*HA PKHLCNAQGFLCKIH*HHK/QTANAIA* GGPGSLEGTLRRPGSPSSLGVGSGKTEV NSQNCRHLGREGVS
4846	12897	A	5722	3	444	FFFFLRLQSL/NSVI*AGVQ/QPLPPEFKRL SCLSLPSSWDYRCAPAHSAFNCIFSKD/M GFTMLTRLVSNWQQ/CELPTLASQSGIT GVSHHTQPIYHFIFVETEFHHVAQAGVK /PPSLK*SSRLSLPKQWNYSHPLYALF NETFFFK
4847	12898	A	5723	1	6738	
4848	12899	B	5724	107	467	MRLHETLKQCQDLKTEKSQMDRKINQL SEENGDLDFKLREFASHLQQLDALNEL TEHHSKATQEWLEKQAQLEKELSAALQ DKKCLEEKNEILQGKLSQLEEHLSQLQD NPPQEKGEALX*
4849	12900	A	5725	149	577	GLLSTRPISCRHTL*GPLQSSWEYMDVP WDLRASEGNGKLLYSARDCTLQQIHSVF QKLDVEEPDSANSSFYSTRSAPASQASLR ATSSTQSLARLGSPDYGNSALLSLPGYRP TNRSSARRSQAGVSSGAPGEGTTGTYY
4850	12901	B	5726	24	219	MPRSSRTKSCRSSCGAWSSCMKENKELR AEAERLGHELQQAGLKTKEAEQTCRHL TAQVRSLGGTX*
4851	12902	A	5727	272	683	
4852	12903	A	5728	1	406	
4853	12904	A	5729	211	5508	IWCLFPLSVHMGLIYSQKCLEEKNEILQG KLSQLEEHLSQLQDNPPQEKGEVLGDVL QLETLKQEAATLAANNNTQLQARVEMLE TERGQQEAKLLAERGHFEEKQQLSSLIT DLQSSISNLSQAKEELEQASQAHGART AQVASLTSELTLNATIQQQDQELAGLK QQAQEKQAQLAQTQQQEQASQRLRHQ VEQLSSSLKQKEQQLKEVAEKQEATRQD HAQQLATAAEEREASLRERDAALKQLE ALEK

4854	12905	A	573	114	5270	SARSASFRPGRPAARRPKCSHPLVPDGV PECCCKCVHPASTNFPRTSTAARHSHHN DGSTSTMGRTWQI/VGYLVVSQGLPLDT SALQAQLRETLPPHMVPEVLLQLPQLPL NANGKLDKALPLPELKAQAPGRAPKA GSETIAAAFSSLLGCDVQDADADFFALG GHSLLAMKLAALSRQVARQVTPGQV MVASTVAKLATIIDAEDSTRRMGFETIL PLREGNGPTLFCFHPASGFAWQFSVLSR YLDP
4855	12906	A	5730	111	407	NLLRTMIFWFGFEDRVWLCCPVLATSV LTATS/TFPGFKQFSLSLSSWDYRCIPP HPGNLWYF**RQGFTMLARLDSNSGPQA IHPPQPPKVLGLHV
4856	12907	A	5731	3	613	GLRALRRGQGLPGL*CCSRPQSPRAQG HPSMGGPMQVRVTPPRGMASVGPQSYGG GMRPPNSLAGPGLPAMNMGPGVRGPW ASPSGNSIPYSSSPGSGYTGPGGGGPPGT PIMPSPGDSTNSSENMYTIMNPIGQAGAGR ANFPLGPGPEGMAAAMSAMEPHHVNGS LGSGDMDGLPKSSPGAVAGLSNAPGT DDGEMAA
4857	12908	B	5732	134	471	MYAKGGKGSAPSDSQAREKLALYVYE YLLHIGAQKSAQTFLSEIRWEKNIMPSPG DSTNSSENMYTIMNPIGQAGAGRANFPLG PGPEGMAAAMSAMEPHHVNGSLGSGD MDG*
4858	12909	B	5733	223	692	MEPSPRAQGHPSMGGXMQRVTPPRGMA SVGPQSYGGGMRPPNSLAGPGLPAMN MGPGVRGPWASPSGNSIPYSSSPGSGYTG PPGGGGPPGT PIMPSPGDSTNSSENMYTIMNPIGQAGAGRANFPLGPGPEGMAAAMS AMEPHHVNGSLGSGDMDG*
4859	12910	B	5734	228	292	XLARDDHERVMGRQPRASLRA*
4860	12911	A	5735	1	1753	MYAKGGKGSAPSDSQARENLSAFQAA TELTSLDRLALYVYFYLLHIGAQKSAQT FLSEIRWEKNITLGEPPGFLHSWWYGL GCCGVFDLYCAAPDRREACEHSGEAK AFQDYETPERPAHRHGNAGRAGSSSGMI DVGSSDPQILRPTTPVCSLTNASSLSHG AGHLQRGGGTPQSAAAAPSPVMGSMAP GDTMAAGSMAAGFFQGPSPGSPHNP NAPMMGPHGQPFMSPRFPGGPRPTLRD GSQPPAGPPWVPSPPSGAMEPSPRAQG HPEHGRPNARGVTPPRG/MGPAWGPRA YGGGMRPPNSLTRPACLPNMNGPRK FVGPPWAQPPVEYSIPYSSSPGSGYTGP GGGGPPGT PIMPSPGDSTNSSENMYTIMNPIGQAGAGRANFPLGPGPEGMAAAYGA GMEPHHVNGSLGSGDMDGLPREFPQAP VAGLSNAPGT PRDDGEMAAAGTFHAPS SQSENYS PGMTMSRVNWAAPGALCG PRLPRRCLRAKGLKVT PSGTLDSLANS QGLPMLGGPTRKTLTILLKTQGP RETFFS VWTLPAICILVPERKALWGGPSSPGRQG GGAH
4861	12912	B	5736	315	458	NGPSRTQQPSLTDVLYCPEAIVSLVGVL RLAACQEHKRAPEVYVAFT*
4862	12913	A	5737	202	402	
4863	12914	A	5738	1	3156	

4864	12915	A	5739	1	1470	MAPEENAGTKLLQSFERRFLAARTLRS FPWQVGGGASGEACGACSPGADGMG LPAETPGAPATEGSHSALPHTSIACFNVP VNAPLRFSLPSTRSLEAKLRDSSDSELL RDILQKHEAVHTELLDELYEALAETLMA KESTQGHWSYLLPRYPSCDKVKTPRKA RSHSPSTAIISHGTTGLVTWDAARYLAE WAIKNLAAFTNRTVLELGSAGLTGLSI CKM/WPPPDHLDHCHSRVLEQLRGNVL LNGLSLEADITANLDSPRVTVAQLDWDV ATVHQLSAFQPDVVITADVLYCPEAIVSL VGVLRRLAACWEHQWAPEVYMAFTVR NPETCQLFTTELAPSTCEGVLSLSHLTDK NTRTHRGQETPELPQIAARPPGFSFTVH PSPPLPPDFAPAPPEHSPSWQPCAKMHPQ QPLPAHRDMDDPVPVHVGPVNYRANK QASTRRHTGFHDRVPHNLAQEAGQAWG SGLSSQHFRRLRQED
4865	12916	A	574	1	2967	
4866	12917	A	5740	2	413	
4867	12918	A	5741	3	231	
4868	12919	A	5742	83	1503	SWNTPYNHWATKQ/LSSHYSRGGAKYE GEAVKQSLVESYTHPNSNETERSANIDT VMNWFTKEDDFVTLCYREPDNVGHRF RPEAENRKLMIQQIDRTIRPWDDHREET QCQDPLSNYIKFMDLVKFDIVGYGGFG MPLPKLGQEEALYQALKNAYPHLHIYK KEGFPEHFHLAKHDRVLPVIMYANFGYS INGISLLYFYTHLCDKYFNVHFFHEPLSL WRAQTTPSLSHRYISLVRHMDATNLDAS EAQLPGSPYPDSAPGPANLDSTQDLPQR RLSWPYPRPRPPNAHPGPALQPAPRTLLL TLPPGPAPSLPPRTALGPPPLQSRPGFRPV SRQRCGPAHFMAPEENAGTELLQSFER RFLAARTLRSFPWQGGGGRAERPAGLA GVQGGTGWVSVLKPPALLPREFLGSPRS GPRDPVPVPGA WPKSLAPLLPRELAAED EGVSTALGGQTRARCGVQFTIITTF
4869	12920	A	5743	266	477	DFSLSRPHGA*KQN*ETHQILSCC/GDILH KTVK/HSCVCEAPAVRQICPVLSLRTHQK ARGCPHRAFGRAV
4870	12921	A	5744	148	592	SHVALGQLGWLTRAVRSSWRWELCVSS TGSGLPAPSLKQPKSCRCW*EEVKTGSC VGISHWQTST/VFPQAVFHLPPVLLPRSL ACLSRPGCAQIR\CQ*TPPYPLFPILTYS FGMLSSTVLIRHILETNKKEKSLAAEGV RHLQVS
4871	12922	A	5745	164	667	ERGTYICQITTSLYRAQQIIQLNIQASPKV RLSLANEALLPTLICDIAGYYPLDVVVM WTREELGGSPSPSLWSSFSKPQAKALAG TYSISSSLTAEPG/RLQVPLYTCQVTHISL EEPLGASTPGCPTRAENSLGSHLCQQSLP SCTDVPWGFRDQAPNRTWAASG
4872	12923	A	5746	1	790	VEELSKKLADSDQASKVQQQKLKVGQL GEVWWPLDKGGKLFSLWGRGGLVYK WFLLIYKISYATGIVGYMAVMFTLFLN LLFKIKPEDAMDFGISLLFYGLYYGVLER DFAEMCADYMASTIGFYSESGMPTKHL DSVCAVCGQQIFVDVSEE/EDH*EHRCS/ CFHEFCIRGWCIVGKKQTCPYCKEKVDL KRMFSNPYPPLGSLGVCCKKVLASVT CIWVLLGPSLLPPTRTCQTMNNKKIMKV MMRIKRMMTDTMAS

4873	12924	A	5747	1	1005	FRGRAVKMAAVVEVEVVGGAAGEREL DEVDMSDLSPREEQWRVEHARMHAKHR GHEAMHAEMVLILIALTLVVAQLLLQW KQRHPRSVMVTLFQMWVPLYFTVKL HWWRFLVIWILFSAVTAFTFRATRKPL VQTTPLRLVYKWFLLIYKISYATGIVGYM AVMFTLFGNLNLFKIKPEDAMDFGISLLF YGLYYGVLERDFAEMCADYMASTIGFY SESGMPTKHLSDSVCVCGQQIFVDVSE EGDHETTYRLSCNHVSHEFCIRGWCIVG KKQTCPCYCKEVDLKRMFSPWPERPHV MYGQLLDWLRYLVAWQPVIIIGVVQGIN YILGLE
4874	12925	B	5748	99	236	XTTSTSSTVTVTAPGPAATGSPVKKHRP LLPKETAPAVQRRVVWNSSX*
4875	12926	A	5749	1	783	
4876	12927	A	575	1882	3402	LDASFWIPPKATQGMTWIFTFPSSPSYNS S/CYAGWLKGSAPLQLSQPHHTAYIIFTS GSTGRPKGVMVGQTAIVNRLLWMQNH YPLTGEDVVAQKTPCSFDVSQFFAEYGV TTTHFVPSMLAAAFVASLTPQATARQSCAT LKQVFCSGEALPADLCRVWQQLTGAPL HNLYGPTAAVDVSWYPAFGEELAQVR GSSVPIGYPGYLGRPDLTASRFIADPFAI PGERMYRTGDVARWLDNGAVEYLGRS DDQLKIRGQRIELGEIDRVMQALPDVEQ AVTHACVINQAAATGGDARQLVGYLVS QSGPLDTSALQAQLRETLPPHMVPVVL LQLPQLPLSAKAGCPAAQVPRVAQVRV CAVLEDLGDIRESEGERKQEADAVLGTQ DTPRVTSQPNGLLLKIEPQENVKIEGQHQ GLVWLCVAASPVLVRVTREKEEKKKEE GNNMRFTSLVLSVLVNIVRALEKKVLDI MFNNCRTGVQAITLSHRRALAIAlAR YIKSALYDG
4877	12928	A	5750	1	1626	
4878	12929	A	5751	1	542	CGWNTGYCD/YPCQQAHWPEHIKSTQS VATALQQGADVEVNTEPLNKSSQSSSST QSAPSETASASKEKETSAEKSKESGSTL DLSGSRETPSSILLGSNQGSSVKRCDKAT LLCPNHHRPPAAPQLPRPEVPFPEL*NSR LSPPVFKKKGIRRVPIPTSTSTKSLLPKE SRLDTFWWD
4879	12930	A	5752	1779	3628	MEISEDVYTAUGHSDSEKSDSSDSEF ISDDEQKSKDEPEDTEDKEGCQMDKEPS AVKKPKPTNPVEIKEELKSTSPASEKAD PGAVKDKASPEPEKDFSGKAKPSPHPIK DKLKKGKDETDSTVHLGLDSDSENELVI DLGEDHSGREGRKNKKEPKESPKQDV VGKTPPSTTVGSHSPETPVLTRSSAQTS AAGATATTSTSTVTVTAPAPAATGSPV KKQRKLUPKEVTAIVQRRVRELK*SF KRPPKSGTCRRCSVSSSSSSSKTSSSSHQS SQGTRYQTRQAVKAVQKKEITQSPSTSTI TLVTSTQSSPLVTSSGSMSTLVSSVNADL PIATASADVAADIAKYTSKLMDAIGT MTEIYNDLSKNTTGSTIAEIRRLRIEIEKL QWLHQELSEMKNLELTMAEMRQSW EQERDRLIAEVKKQLELEKQQAVIDETKK KQWCANCKKEAIFYCCWNTSYCDYPCQ QAHWPEHMKSTQSATAPQQAADAENV TETLNKSSQSSSSTQSAPSETASASKEK ETSAEKSKESGSTLDLSGSRETPSSILLGS NQGS DHSRKNKSSWSSSDEKRGSTRSDH NTSTSTKSLLPKESRLDTFWWD

4880	12931	A	5753	2	1711	RSEDSEKSDSSDSEYISDDEQKSKNEPED TEDKEGCQMDKEPSAVKKPKPTNPVEI KEELKSTSPASEKADPGAVKDKASPEPE KDFSEKAKPSPHPIKDKLGKDETDSP VHLGLDSDSESELVIDLGEDHSGREGRK NKKEPKESPSPKQDVVGKTPPSTTVGSHS PPETPVLTRSSAQTSAAATATTSTSTV TVTAPAPAATGSPVKKQRPLLPKETAPA VQRISCGTSSTVQQKEITQSPSTSTITLVT STQSSPLVTSSGSMSTLVSSVNADLPIAT ASADVAADIAKYTSKMDAIGTMTETI YNDLSKNNTTWKAQLAEDSQGLRIEIEKL QWLHQELASEMKHNLELTMAEMRQSL EQERDRLIAEVKKQLELEKQQAVIDETKK KQWCANFKKEAIFYCCWNTSYCDYPCQ QAHWPEHMKSTQSAYCSSSRKADAE VNTETLKLSPSQSSSSTQSAPFRKRPAP SKEK\ETFSLRKAKESGSTLDLGSRETPS SILLGSNQSDHSR\SNKSSWSSSDEKRG S\TRSDHN/TPSTQHGRSLLPGKESRAGTP FLGTSK
4881	12932	A	5754	1	191	MQK*ITAWAPAPMKIKIIASPERKYSVWI GGSIWQPLST/FQQMWISKQEYDESGPSI VHRKCF
4882	12933	A	5755	2	1203	LSRRRCQLSHSVLPPLRRRVSLPVAMEEEI AALVIDNGSGMCKAGFAGDDAPRAVFP SIVGRPRHQGMVMVGMGQKDSYVGDEA QSKRGILTLKYPIEHGIVTNWDDMEKIW HHTFYNELRVAPEEHPVLLTEAPLNPKA NREKMTQIMFETFNTPAMYVAIQAVLSL YASGRITGIVMDSGDGVTHTVPIYEGYA LPHAILRLDLAGRDLTDYLMKILTERGY SFTTTAEREIVRDIKEKLCYVALDFEQEM ATAASSSSLEKSYPDGGQVITIGNERFR CPEALFQPSFLGMESCGIHETTFNSIMKC DVDIRKDLYANTVLSGGTTMYPGIADR MQKEITALAPSTMKIKIIAPPERKYSVWI GGSILASLSTFQQMWISKQEYDESGPSIV HRKCF
4883	12934	A	5756	3	412	SRFPEGLFQPFPGMKSCGIHETTFHSHI IKFDVAIR\KDLYANTLLPGGNHQVSGAL LTGMQKEIHAPAAQATLRFKIIAPPGSAS TRW/VGSVGSILASLSTFQQMWISKQE YDESGPLHSSTAKCFLNGLSQIA
4884	12935	A	5757	1	2297	MGRDWSLSLEEDRKMRESLEHARDL LNCCDQNAHHMDSEVQAEVVSEGDEE LIGKWSKAYCHRCEQKDDLKWELEFKRE AEHKSLEILQPDHVVEKKNPGGGRNQST SSSWVGTVAEITTEAVKCKIQVLQQQA DDAEERA\ERSQREFREERRAREQAEAE VASLNRRIQ\VEEELDRAQERLATALQK LEEAEK/SLADESERRY*RLFEN\ALKRL KEKIGTSREIQLK\EAKHIAEEAD\RKYEE V\ARK\LVIIEGDLERTEVERA\ELAESRCR EMDEQIRLMDQNLKCLSAEEKYSQKE DKYEEIEKILTDKLKEAETRAEFAERSVA KLEKTIDDLEDNSTSGDPVEKKDETFFG VSVAVGLAVFACFLSTLLVLNKCGRR NKFGINRPAVLAPEDGLAMSLHFMTLGG SSLSPTGKGSGLQGHIIENPQYFSDACV HHIKRRDIVLKWELGEGAFGVFLAECH NLLPEQDKMLVAVKALKEASESARQDF QREAE\LLTMLQHQHIVRFFGVCTEGRPL LMVFEYMRHGD\NRFLRSHGPDALLA GGEDVAPGPLGLGQLLAVASQVAAGMV YLAGLHFVHRDLATRNCLVQGGLVVKI GDFGMSRDIYSTDYRVGGRTMLPIRW MPPESILYRKFTTESDVWSFGVVLWEIFT YGKQPWYQLSNTAIDCITQGRELERPR

						ACPPEVYAIMRGCWQREPSNATASRMC TPGCKPWPRHLLSTWMSWARGPAQGLG VVSRTGACPQHPP
4885	12936	A	5758	3	636	WAWNQAEEVASVNGRIQLVEEELDCA QERLATALQKLEEAGKADESERGMKV IENRALKDEEKMELOEIQLKEAKHIAEEA DRKYEEVARKLVIEGDLERTEVERAELA ESRCREMDEQIRLMDQNLKCLSAAEK YSQKEDKYEKEIKLTKLREAEETRAEF AERSVAKLEKTIDDLEDKLCCTKEEHL TQRM LDQTLLDLNEM
4886	12937	A	5759	1	239	QCCSGGTHGNPAIGDRMQKQILPWAPA QMKIRFMAPPERKYSVWIAAPILASLSTS SRMWISKQEYDESGPSIVHRKCF
4887	12938	A	576	22	413	
4888	12939	A	5760	3	1458	ADPPPVHTRRQLTMDDDIAALVVDNGS GMCKAGFAGDDAPRAVFPISVGRPRHQ GVMVGMGQKDSYVGDEAQSKRGILTK YPIEHGIVTNWDDMEKIWHHTFYNELRV APEEHPVLLTEAPLNPKANREKMTQIMF ETFNTPAMYVAIQAVLSLYASGRRTGIV MDSGDGVTHTVPIYEGYALPHAILRLDL AGRDLTDYLMKILTERGYSFTTTAEREIV RDIK/EEAVLRRPGLRARDGHGVASSSSLE KSYELPDGQVITIGNERFRCPEALFQPSFL GMESCGIHETTFSIMKCDVDIRKDL YA NTVLSGGTHQFPLCRPGC*KKITALEP ATMKIRIIA/PPEAQSTPLWNRGAPILAS LVHLPKMWQDQKSREYDESGPLPFVHR KICFF
4889	12940	A	5761	171	324	
4890	12941	A	5762	3	383	
4891	12942	A	5763	2	314	FFFFISALKALFAFLQILLFQVNVLRITAH IVISFINLLSVTPSKAFLLAFIFCREDYSF TAYATISYLKIGPKANLLNN EAYVITMQ VTKSTQNSFRVNGY
4892	12943	A	5764	1	176	MRTFALLTAMLLLV/HAQAEPLQARAD EAAAEQPGADDQEMAHAFTWHESAA LPLSA

4893	12944	A	5765	1	2674	GKHKLLSTGPTWPWSIREKLCLASSVMR SGDQNWVSVSRAIKPFAEPGRPPDWFSQ KHCASQYSELLETITETPKRKRGEKGEVV ETVEDVIVRKLTAERVEELKKVIKETQER YRRLKRDAELIQAGHMDSRLDELCNDIA KKKLEEEAEVVRKATDAAYQARQAVK TPPRRLPTVMVRSPIDSASPGGDYPLGDL TPTTMEETSGVTPGTLPTSTPVSFPGIPD TLPPGSAPLEAPMTPTVDDSPQKKMLGQ KATPPPSPLLSELLKKGSLLPTSPRLVNES EMAVASGHLNSTGVLLLEVGGVLPMIHG GEIQQTPNTVAASPAASESVSQATTVM PALPAPSSAPAVSTTESVAPVSQPDNCVP MEAVGDPHTVTVMDSSEISMIINSIKEE CFRSGVAEAPVGSKAPSIDGKEELDIAE KMDIAVSYTGEELDFETVGDIIAIEDKV DDHPEVLDVAAVEAALSFCCEEDDPQSL PGPWEHPIQQERDKPVPLPAPEMTVKQE RLDFEETENKGIHELVDIREPSAEIKVEPA EPEPVISGAEIVAGVVPATSMPEPPELRSQ DLDEELGSTAAGEILEADVAIGKGDETPL TNVKTEASPESMLSPSHGSPNIEDPLEAE TQHKFEMSDSLKEESGTIFGSQIKDAPGE DEEDGVSEAASLEEPKEEDQGEGLSE MDNEPPVSESDDGFSIHNLQSHTLAD SIPSSPASSQFSVCSEDQEAIAQKIKWKK AIMLVWRAAANHRYANVFLQPVTDIA PGYHSIVQRPMDLSTIKKNIENGLIRSTA EFQRDIMLMFQNAVMYNSSDHDVYHM AVEMQRDVLEQIQFLATQLIMQTSSEGI SAKSLRGRDSTRKQDASEKDGGRGR CAIEADMKMKK
4894	12945	A	5766	1	419	YANVFLQPVQDDIAPGSPSIGQRPMDL STIKKNI*NG*SEAPADFQR*HMLMFQN LLMYHSSDHYFYHIANEMQ/RDVLEQIQ QFLATQLIMQTSSEGISAKSLRGRDSTR QDASEMDGGTRGRVCAIEADMKMK K
4895	12946	A	5767	2	111	ISAKSARGRDSTRKQDASEKDSVPMGSP AFLLSLF
4896	12947	A	5768	3	2884	GKHKLLSTGPTWPWSIREKLCLASSVMR SGDQNWVSVSRAIKPFAEPGRPPDWFSQ KHCASQYSELLETITETPKRKRGEKGEVV ETVEDVIVRKLTAERVEELKKVIKETQER YRRLKRDAELIQAGHMDSRLDELCNDIA TKKLEEEAEVVRKATDAAYQARQAV KTPPRRLPTVMVRSPIDSASPGGDYPLGD LTPTTMEETSGVTPGTLPTSTPVSFPGIP DTLPPGSAPLEAPMTPTVDDSPQKKMLG
4897	12948	A	5769	3	627	PRGENRFKAQPEWRKTPCQMMLSQSTF RKTYYGKIFTTILALPYVGKELNMIIML PDETTDLSTVEKSDTHAKFVWETSLDM MAEEVVKLSIPRFKLEESYDMESVLRNL GMTDAFEAGARANFSGMSQTDLSLVQR SCTKSICGRSNEGRPREAASPPKVAAMM MRCA/RFCPPPPAPDHPFLFQIHRKTN GULFCGRFSSP
4898	12949	A	577	1	2148	
4899	12950	A	5770	3	626	YNLVTFR/LAVLSFEKDDDHNGHIDFITA ASNLRKMYISIEPADRFKTKRIAVKILV KPTTTGTVSGLVCFEMIKVTGGYPFAAY KNCFLNLSHS/IFVVFTETTEVRKTKIRNG ISFTIWDRTVHGKEDFTLLDFINAVKE KYGIEPTMVVQGVKMLYVPVMPGHAK RLKLTMHKLVKPTTEKKYVDLTVSFAPD IDGEDLPGTSK
4900	12951	A	5771	92	265	SFELFADKVPKTA/WLDGKHVVFVGKVE GMNIVEAMERFGSRNGKTSKKITIADCG QLE

4901	12952	A	5772	1	1310	GNSPPSELKWKAKSEDLRHRGLKAQAEI KGSTQQIGFTTDPARMARSSPYPTDVARV VNAPIFHVNSDDPEAVMYVCKVAAEWR STFHKDVVVDLVCYRRNGHNEMDEPMF TQPLMYKQIRKQKPVLOKYAELLVSQG VVNQPEYECVSMHGVRNKPSYNSTKSS MDGLILHPATGLVFVLSKQCEEIHQPVV WTCEQREAEENATAEENRVLLAMVNPTV FFDIAVDGEPLGRVSFEVGRAAACGNGA QKVGRGRENFPCL*ATGEK\GFWL*GVP CFHRLFPRLVCVQGGELQQRH*WPLVG KPHSMGKKI*KIEELPSLKHTGSPGILSP WQNAGPQTNGFPFSICTAKTEWLEW PSHVVFVHK*KEG\MNIVEAHWSRFGS RINGKTQQRSPFADCGQLLISLTCVFILT TKIISFCRLRRAPLQPHLLAVS
4902	12953	B	5773	47	204	XQHTFCKRCGVQSFYTPRNPGGFGIAP HCLDEGTVRSMVTEEFNGSDWEKA*
4903	12954	A	5774	2	402	CGDRGALRPPSCAGRSGPGPPRPPRPPR LPWHPAPPAHGAPLARPGARARRSEKPP SEKPRLRSSPRAQEEGPGEPPELALLP PPPPPPPTAPRRRRRPPGPGRAAGALG DVPEAAEA YLERVPPSSC
4904	12955	A	5775	2	241	FSCLSLKSWDYRALPPSPANLFLVETG FHHVGQASLKLLTSGDPPASASQTVGIT GMSHAWPVSSFYIWSHWAPRNS
4905	12956	A	5776	22	643	VVEFPVLTMAATSGILSALGNFLAQMIE KKRKKENSRLSDVGGPLRYAVYGGFFTG PLASHFFYFFMEHWIPPEVPLARVRRLLL DRL\FFAP\AFLMLFFLIMNFLEGKDAS\T FAAKMRGGFWPAAEDETCTRVWTP\QF ININYPFESSGCGFFGQPGQLFWYAYL ALLGEVTTTRWENIRCTCGRSGGLHPPK REQPIQSGCH
4906	12957	A	5777	23	448	ELESRSVTQAGVQWCDLGS\QPPPL/SF KQFSFLSLLSSWDYRHVPPCANVCILVE MGLVGQAGLELLISSDTPISVSQSAGIISV SHGTQPHIGNFLEQLKVQLCYTSFLCFT KSSTVKHIQLIHKITLRNTKNKARI
4907	12958	A	5778	25	396	ISGRSTFLSFRQGLSALSPRLECSVAISA HCNLRPLGSSN\GTTGA*HHTRLILYF/LA EMGFHHVGQAGFEVLTSSNPPASASTSA RITGMSNRT\GHLFNHFP*MCYKYRCGS LAGRGGSRW
4908	12959	A	5779	80	460	YISLNVTHLIFFFFLRQGL\CSVTQAGV QWCNLSLQPLPPRFK\NWDYRCVTPH LANFVFLVEMGF/LPASASQSAGITGVSH CTQLGVFICICYGSSHGVRQSWHQFCSS KLLVKSGRVGVGLLG
4909	12960	A	578	222	666	SLCFCFLEVSLPACQETYGKSPFWILSIPF EDIARNLMKRTVCAKSIFELWGHGQSPE ELYSSLKNYPVEKMVPFLHSDSTYKIKIH TFNKTLTQEEKIKRIDALEFLPFEGKVNL KKPQHVFSVLEDYGLDPNCIPENPHNIYF GRW
4910	12961	A	579	1664	1844	WQKLLFLFGTESCSVARVGVQWRHLSS PKPPP\GSSNS/PASASRVATGAHLHAR LIFVFL
4911	12962	A	5792	16	301	IFASTAPKRSWARLGPPQILVSVATKASF GAPTIPSRPGPQSVFANSDFPAPPQIPSR PVRIPP GIPPGVPRRPPAAPSRTIIRPAEP SLLD
4912	12963	C	5793	78	209	MSVFXXXXXXXXXXXXXXXXXXXXXNEET NHPLGVVYRLSDSTQYI*
4913	12964	A	5794	119	231	

4914	12965	A	5795	69	909	EWCLLSPPEGHTFHLIHWGITELKTKRRGR KPSRPPMCYGKCARCIGHSLVGLAILCI AANILLAYFPKGETKNASVENHLSRFVWF FSGIVGRL/VLLMLPAQHFLHWGLEQD DCACG\CCGHENCGKRCAMLSSVIGWLS IGI\AGSGLLWSIV/VQPLGLARKDPLCLD S/LSGQWKQLQPLPSTEGPVTFWITSTWSE CTEPKHIVKWNVSLFSILLALGGPELILC LIQVINGS/VLGGICGFCCSHQQQYGLAK RTNPGTEPQSFLYFHCNLSYLHLYSIC
4915	12966	A	5796	1	200	RGPVLLDTS/TWARCNEPKPI/VEWNDTL FSN/LLASGGIEFILCLIQVINGVLGGICGF CCSHQQQYDC
4916	12967	A	5797	2	424	RLSLTLVAQAAVQWHNLGSLQPPPPGFK RFSCSLSPSSQDHRHTPPCPA/NSFVFLVE TRLHHAGQAGLKLPTSG/DTSSASQSAR ITGVSHRARCWDSNSTIFLGLANSNWR NVFLIVGGERIKGKHTHFNTHSMSEFEE
4917	12968	A	5798	46	626	
4918	12969	A	5799	1	1004	MWLILAGLAWAGLWVSDGLKDVLVMA KGKSRRGKSAPKHIMSLGPLLMIAFAICH FASVMGFHYLEVNLRLQQCFKYQLIETA FAVLVQSVLRIYSSRIWDKTSLECLKVLT GHTGSVLCLQYDERVIVTGSSDSTVRVW DVNTGEVLNTLIHHNEAVLHLRFSNGLM VTC SKDRSIAVWDMASATDITLRRVLVG HRAAVNVVDFDDKYIVSASGDRITIKNR DKAEVAYTNLVWSTSTCEFVRTLNHGHK RGIACLQYRDRLVVGSSDNTIRLWDIEC GACLRVLEGHEELVRCIRFDNKRIVSGA Y/DMGFSSLELLATWLPNA*GSSFTAEL
4919	12970	A	58	1107	1365	HSGSAGMHWNLFLVHMCMAHI*LFDRL LHMM*CNGRGP*FALCTRCSQ*DSGAN WDK*KNILPLRNFGWLGFNRDLGSRGW VPEV
4920	12971	A	580	3	439	
4921	12972	A	5800	1	3084	
4922	12973	A	5801	3	265	
4923	12974	A	5802	242	401	DLYAATYSHSHT/ILVWSTSTCEFVRTLN GHKRGIAQLQYRDRLVVGSSDNTI
4924	12975	A	5803	2	385	FVFAAARGERGGFAGAVMEPDSVIEDKT IELMLPKCMFGILLKKAGYSKRKESWK MLDCCLFSD*SERENPHSFWIGGSEVQNI FQNTSVMEDQNEDESPKKNLWQISNGT SSVIVSRKRPSEGNH
4925	12976	A	5804	1	1248	
4926	12977	A	5805	2	1653	RGGAAGAAMEPDSVIEDKTIELMCSVPR SLWLGCANLVESMCALSCLQSMPSVRC LQISNGTSSVIVSRKRPSEGNH YQKEKDL IKYFDQWSESDQVEFVEHLISRMCHYQH GHINSYLKPMQLQRFITALPEQGLDHIAE NLSYLDARSLCAAELVCKEWRVISEG MLWKLIERMVRTDPLWKLSERRGW DQYLFKNRPTDGPPNSFYRSLYPKIIDDIE TIESNWRCGRHNLQRIQCRSENSKGVYC LQYDDEKIISGLRDNSIKIWDKTSLECLK VLTGHTGSVLCLQYDERVIVTGSSDSTV RVWDVNTGEVLNTLIHHNEAVLHLRFS NGLMVTCSKDRSIAVWDMASATDITLR RVLVGHRAAVNVVDFDDKYIVSASGDR TIKVWSTSTCEFVRTLNHGHKRGIAQLQY RDRLVVGSSDNTIRLWDIECGACLRVL EGHEELVRCIRFDNKRIVSGAYDGKIKV WDLQAALDPRAPASTLCLRTLVEHSIGR VFRQLQFDEFQIISSSHDDTLIWDFLNVP SAQNETHSPSGVITYTISR

4927	12978	A	5806	1	180	NFKRFHKTIAJETASYWPK/DRHINQRN/ RESPVINPTTYGQLIVDKGAKNTQWGKD NYFN
4928	12979	A	5807	1	355	
4929	12980	A	5808	81	474	LGERRRASLSLSTPGRRRGFKVATQER NPQRAQMRLRRQKKGVVPFWGDFLTE LQ/MGLDSAIPGRPWMATPNKRSKEVRV LQEMQLLQVAAMNYRLRPLEKFVITYFT RMEQLSDKESYKLSQCLEPENQ
4930	12981	A	5809	3	383	
4931	12982	A	581	1	691	MDQDSASTKTCPGTHRKSGPRSREQHG ALGAANAHD TVRDGERYDRWSGPRRRE QHGAALGAANAPD TVRDGERRSLRRDWR DCAEATADVSGVRSLSRLLSARRLALAL AKAWPTVLQTGTRGVHFTVDGNKRASA KVSDSISAQYPVVD/HEFDVAVVGAGGA GLRAAFGLSEAEFDTACVTKLFPTRSH VAAQLENYGMPFSRTEDGKIYQRAFGG QSLKFGKGRQA
4932	12983	A	5810	1	148	
4933	12984	A	5811	3	1219	PGAMATLSFVLLLGAVSWPPASASGQE FWPGQSAADILSGAASRRRYLLYDVNPP EGFNLRRDVYIRIASLLKTLKTEEWVLV LPPWGRLYHWQSPDIHQVRIPWSEFFDL PSLNKNIPVIEYEQFIAESGGPFIDQVYVL QSYAEGWKEGTWEEKVDERPCIDQLLY SQDKHEYRGWFWGYEETRGLNVSCLS VQGSASIVAPLLLRNTSARSVMDRAEN LLHDHYGGKEYWDTRRSMVFARHLREV GDEFRRHLNSTDDADRIPFQEDWMKM KVKLGSALGGPYLGVHLRRKDFIWGHR QDVPSLEGAVRKIRSLMKTHRLDKVFVA TDAVRKEYEELKLLPEMVRFEPTWEEL ELYKDGGAIDQWICAHASS*SAAGEPE TSCAGAGGTGRPLT
4934	12985	A	5812	75	130	IHRE*VPAAQGELRGAAE
4935	12986	A	5813	1	1940	MATLSFVLLLGAVSWPPASASGQEFWP GQSAADILSGAASRRRYLLYDVNPPEGF NLRRDVYIRIASLLKTLKTEEWVLVLP WGRLYHWQSPDIHQVRIPWSEFFDLPSL NKNIPVIEYEQFIAGAQSLSHAAVSFPKC FSEMDLKWMSFVPPQLEPPLHPKKAATP GCYSDRTRLPVRKAVLRSGRRACGVCF VVSQCSARDKELHLRDAPSRFVPAPEFH LRGAPSRFVPAPELHLRGAPSRFIPAAFE QILIADLLGVTVPSPWCGSGQSGGPFIDQ VYVLQSYAEGWKEGTWEEKVDERPCID QLLYSQDKHEYRCLLRLLPLPQGWRS QSQVSIAIKGSDTTRPPVEKLSVNSLHVS SARAAGSKAWQGSASIVAPLLLRNTSAR FERWDYSLQRVFSVGVDFRIDGVTFHSH PWFCDRPADVFTRAAACKAGTCLQETQ SLLTWDFVQTRRSMVFARHLREVGDEF RSRHLNSTDDADRIPFQEDWMKMVKL GSALGGPYLGVHLRRKDFIWGHRQDVP SLEGAVRKIRSLMKTHRLDKVFVATDA VRKEYEELKLLPEMVRFEPTWEELELY KDGGAIDQWICAHARFFIGTSVSTFSF SDS*GKEKFLGLDPKTDVQQVLRRPREG V

4936	12987	A	5814	3	1286	PGAMATLSFVFLLLGAVSWPPASASGQE FWPGQSAADILSGAASRRRYLLYDVNPP EGFNLRRDVYIRIASLLKTLKTEEWVLV LPPWGRLYHWQSPDIHQVRIPWSEFFDL PSLNKNIPVIEYEQFIAESGGPFIDQVYVL QSYAEGWKEGTWEEKVDERPCIDQLLY SQDKHEYRGRWFWGYEETRGLNVSCLS VQGSASIVAPLLLRNTSARSVMLDRAEN LLHDHYGGKEYWDTRSMVFARHLREV GDEFRRHLNSTDDADRIPFQEDWMKM KVKLGSA LGGPYLG VHLRRKDFTWGHR QDVPSLEGAVRKIRSLMKTHRLDKVFVA TDAVRKEYEELKLLPEMVRFEPTWEEL ELYKDDGGVAIIDQWICAHARCLPTSLSAE SGSGGFQRFFCPKYSVSEQM VACVHSGH FHTVCLLV
4937	12988	C	5815	164	391	
4938	12989	C	5816	321	341	MAALAS*
4939	12990	A	5817	128	526	FFFFIFKTASHSVVQAGVQWRSLSMQP PPPGLKQFSLHLLGSWIKGHLPHPSNFC IFSRDGVSPCWLGWSQTPGLRPQSPKC LGLTGCEATSPWPASLKFLKNCVFHLP YVYLLHVLGPRSCYKQKW
4940	12991	A	5818	3	273	RRPRQRPTDQTQWFSILPDFSLDLQEGPS VESQTHSDPHIPPVDPTTHLTFNHL SIVC VSLTSLPHLGSPCLWSPALVSQEAASH QDRR
4941	12992	A	5819	1	861	MLDSSLALGGLVLLRDSVEWEGRSLLK ALVKKSALCGEQVHILGCEVSEEFREG FDSINNRLVYHDFRDPLNWSKTEEAF PGGPLGALRAMCKRTDPVPVTIALDSLS WLLRLPCTTLCQVLHAVSHQDSCPGDS SSVGKVSVLGLLHEELHGPVGPV GALSSL AQTEVTLGGMGQASAHILCRRPRQ/RP NYQTQWFSILPDFQPGSPRGALCRVPA LIPIHIPPKEREARDSLILPFQFSSEKQQA LLRPRPGQATSHIFYEPDAYDDLDQEDP DDDLDI
4942	12993	A	582	306	458	IYIFLLNCIFLIHIIYFETESCSVAQAGWV QWHDLGSLQALPPGFTPF
4943	12994	A	5820	2	494	LGLLHEELHGPVGPV GALISLAQTEVTLG GTMGQASAHILCRRPRQRPTDQTRVSI LPDFSLDLQEGPSVESQPSDPHIPPVSK NAKARTRKCSLVSGHGRENKSCRGWG WGQGF*GWGRVAASFVPAQVDP TTHLTF NLHLSKKEREARDSLILPFQFSSEK
4944	12995	A	5821	1	498	VRKVSVLGLLHEELHGPVGPV GALSSLAQ TEATLGGYH/VGQASAHMLCRRPRQRP TDQTQWFSILPDFSLDLKEGPSVESQPS DPHIPRVDPTTHLTFNLHLASKKEREARD SLILPFQFSSEKQQA LLRPRPGQATSHIF YEPDAYDDLDQEDPDDDLNLPGQI
4945	12996	A	5822	3	322	HERQMALLKANKDLIPDGMTLTPLLQP LGFEDPVVCEQDVVTAGQDWVTTYDR DYGQQVTGEPQERDKALQELRQELNTL ANPFLAKYRDFLKSHELPSHPPSS
4946	12997	A	5823	3	276	
4947	12998	A	5824	151	204	SGEPFISCGRFWWLQDG/DLMTLPRLVS NSWLKQSSHLGLLKHWDYMSEAPHLAK NFLKAYEVVSLSFHVEGSGGCRMA
4948	12999	A	5825	175	456	IHFVLISAHAVGCEGILWGGWSLRGVGV PHSSAKRS*VGIRPGKGRPGAQLPAGR ARASTEVPMSGAPCPLLGAKNDRGLHAP KRTGTGPSNH

4949	13000	A	5826	188	269	IHFVLISAHAVGCEGISPIEEMGVLSALSIQ EACSPGLQWATSFLASAWVSAPLLQMA HICPIILLGSLKGARATNRFQSLFVQGV SFPARFPHLDLLLQ*P*KNDWTDVSHLE QRGTNPG*RQE*SGPLQPWRAGFLDGQC
4950	13001	A	5827	1	542	
4951	13002	A	5828	2	889	RGLRIPTWALQELAGRVTRGPETGEGR REPGGSASPMRAAFPAGGAGGSVEPPSA RPAPQAGTAARSEEAPARAQAAGMAG PGWGPPRLDGFILTERLGSPTYATVYKA YAKKDTREVVAIKCVAKKSLNKASVEN LLTEIEILKIRHPPHIVQLKDFQWSDNTY LIMEFCAGGDLRSFIHTRRILPEKVARVF MQQLASALQFLHERNISHLDLKPQNILL SSLEKPHLKLADFGFAQHMSPWD\EKH VLRGSPLYMAPEMVCQRQYDARVDL WSMGVILYGETSFPCFSP
4952	13003	A	5829	297	331	
4953	13004	A	583	47	358	SLLTPLVSPVPACPCPSKSEVSPQEHPLP CRPLFRVWRNRQSRGCPQGVEHYGAGA WGLLPVWKSCPPAKTCKWGLP/CPPC GRSCLHSGAALCLLCGGA
4954	13005	A	5830	3	405	
4955	13006	A	5831	3	408	
4956	13007	A	5832	1	530	
4957	13008	A	5833	198	1175	RANPFRMGNHAGKRELNAEKASTNSET NRGESEKKRNLGELSRTTSEDNEVFGEA DANQNNGTSSQDTAVTDSKRTADPKNA WQDAHPADPGSRPHLIRLFSRDAPGRED NTFKDRPSEDELQTIQEDSAATSESLDV MASQKRPSQRHGSKYLATASTMDHARH GFLPRHRTGILDSIGRFFGGDRGAPKRG SGKVPWLKPGRSPLPSHARSQPGLCNMY KDSHHPARTAHYGLPQKSHGRTQDEN PVVHFFKNIVTPRTPPPSQKGAEQRP FGYGRASDYKSAHKGFGVDAQGTLS KIFKLGGDRSRSGSPMARR
4958	13009	A	5834	1	651	MGNHAGKRELNAEKASTNSETNRGESE KKRNLGELSRTTSEDNEVFGEADANQN NGTSSQDTAVTDSKRTADPKNAWQDAH PADPGSRPHLIRLFSRDAPGREDNTFKDR PSEDELQTIQEDSAATSESLDVMSQKR PSQRHGSKYLATASTMDHARHGFLPRH RDTGILDSIGRFFGGDRGAPKRGSGKRLT PPGKNCSLRVPAPEVTRPDPR
4959	13010	A	5835	3	208	
4960	13011	A	5836	71	394	APSARDVSRCAHRARPGAIMLLPSAAD GRGTAITHALTS\ELEDKKELSESEDEEL QLEEFMLKTLDPKDWKNQDHYAVLGL GHVRYKATQRQIKAARKYLVLK

4961	13012	A	5837	146	1910	APSARDVSRCAHRARPGAIMLLPSAAD GRGTAITHALTSASTLCQVEPVGRWF FVKKRRNRNASASFQELEDKKELSEESQD EELQLEEFAMLKTLDPDWKNQDHYAV LGLGHVRYKATQRQIKAAHKAMVLKH HPDKRKAAGEPIKEGDNDYFTCITKAYE MLSDPVKRRAFNSVDPTFDNSVPSKSEA KDNFFEVFTPVFERNRSRWSNKKNVKLG DMNSSFEDVDIFYSFWYNFDSWREFSYL DEEEKEKAECRDERRWIEKQNGATRAQ RKKEEMNRIRTLVDNAYSCDPRIKKFKE EEKAKKEAEKKAKAEAKRKEQEAKEKQ RQAELEAARLAKEKEEEEVRQQALLAK KEKDIQKKAIKKERQKLRSCKIEEINEQ IRKEKEEAARMRQASKNTEKSTGGGG NGSKNWEDDLQLLIKAVNLF PARTNSR WEVIANYMNIHSSSGVKRTAKDVIGKAK SLQKLDPHQKDDINKKAFDKFKKEHGV VPQADNATPSEFEGPYTDFTPWTTEEQ KLLEQALKTYPVNTPERWEKIAEAVPGR TKKDCMKRYKELVEMVKAKKAAQEQV LNASRAKK
4962	13013	A	5838	1	1909	DVSRCAHRARPGAIMLLPSAADGRGTA ITHALTSASTLCQVEPVGRWFEEAFVKKR NRNASASFQELEDKKELSESEDEELQLE EFPMLKTLDPKDWKNQDHYAVLGLGH VRYKATQRQIKAAHKAMVLKHHPDKR KAAAGEPIKEGDNDYFTCITKAYEMLSDP VKRRAFNSVDPTFDNSVPSKSEAKDNFF EVFTPVFERNRSRWSNKKNVKLGDMNS SFEDVDIFYSFWYNFDSWREFSYLDEEE KEKAECRDERRWIEKQNRATRAQRKKE EMNRIRTLVDNAYSCDPRIKKFKEEKA KKEAEKKAKAEAKRKEQEAKEKQRAE LEAARLAKEKEEEEVRQQALLAKKEKDI QKKAIKKERQKLRSCKTWNHFSDNA ERVMMMEVEKLCDRLELASLQCLNET LTSTCKEVGKAALEKQIEEINEQIRKEKE EAEARMRQASKNTEKSTGGGGNGSKN WEDDLQLLIKAVNLF PARTNSRWEVIA NYMNIHSSSGVKRTAKDVIGKAKSLQKL DPHQKDDINKKAFDKFKKEHGVVPQAD NATPSEFEGPYTDFTPWTTEEQKLLEQ ALKTYPVNTPERWEKIAEAVPGR TKKDCMKRYKELVEMVKAKKAAQEQV LNASRAKK
4963	13014	A	584	1248	1667	TNTGGWGP RHAFVQHTLELLSLCLNC GFLVYPFFLSWTVMYGSVNLVNLKYG FQGIVVFYCYVKKLKIWLCLPRPRVP WLPTSDPSLRSPSSMVLNQICRVYSATK RGSVTGSWAYPCVLSRGMMSSELCKSRA
4964	13015	A	5840	3	231	SFFETESCSVAHPGAQWCDISSLP PPPG SSDCPASASRVAGITGTHHAWPIFV VETGFHCLPQPPIVLGLQA
4965	13016	A	5841	2	300	RRRLALSPAGVHWHGLGSLQPPPPWFER FSCGLLSGWDCCRAPP RPASFFVFLVET GFRHV GKDGLDFT/S/GDPPALASQGA WLAGVSHRTRPQIHFF
4966	13017	A	5842	227	290	
4967	13018	A	5843	1	225	HCNFPPLPVQAILGSSNSRASASRVAGTTG ALQHMQLIFCILVETGFHRVAQAGDLL SLTIHPPRPVKVLGLQA
4968	13019	A	5844	3	147	LEIFFFFSFTFF/CRWGLTMFIRLVNFW PQMILLPLPPKVLGLQA
4969	13020	B	5845	47	241	GKDFNMPLTISRITPGSKAAQSLSQ DLVVAIDGVNTDTMTHLEAQNKISASY NLSLTLOK*

4970	13021	A	5846	3	408	CGGIPSQATIFTLSTLISSVTSLNSTSFSTK VHTLSQNLVVFREPLKLTFLTL*ASAAF IALSN*SRT*RASWGVIC*DCMSSSRPPE DCFPK*YFCITDMPWLRKNFFSTFQSK CRF*GTPICQKDKTSKK
4971	13022	A	5847	1	2209	AAADSTSMSYSVTLTGPGPWGFRLOGG KDFNMPLTISRITPGSKAAQSLSQGDV VAIDGVNTDTMTHLEAQNKIKSASYNLS LTLQKSKRPIPISTTAPPVQTPLPVIHQK DPALDTNGSLVAPSPPEARASPGTPGTP ELRPTFSPAFSRPSAFSSLAESDPGPPRA SLRAKTSPEGARDLLGPKALPGSSQPRQ YNNPIGLYSAETLREMAQMYQMSLRGK ASGVGLPGGSLPIKDLAVDSASPVYQAV IKSQNKPEDEADEWARRSSNLQSRFRIL AQMTGTEFMQDPDEEALRRSSTPIEHAP VCTSQATTPLLPASAQPPAAASPSAASPP LATAAAHTAIASASTTAPASSPADSPRPQ ASSYSPAVAASSAPATHTSYSEGPAAPAP KPRVVTTASIRPSVYQVPASTYSPSPGA NYSPTPYTPSPAPAYTPSPAPAYTPSPVPT YTPSPAPAYTPSPAPNYPNAPSVAYSGGP AEPASRPPWVTDSDFSQKFAPGKSTTSIS KQTLPRGGPAYTPAGPQVPPLARGTVQR AERFPASSRTPLCGHNNVIRGPFVLVAM GRSWHPPEFTCAYCKTSLADVCFVEEQN NVYCERCYEQFFAPLCAKCNKIMGEV MHALRQTWHITCFVCAACKKPFNGSLF HMEDGAEPYCEKDYINLFSTKCHCCHFP VEAGDKVIEALGHTWHDTCFCAVCHV NLAEQQPFYSKDRPLCKKHAHTINL
4972	13023	A	5848	1	537	RTRGGDVKTDLNNIEEFLEETLTPEKYPI LAAKHREYNTEDIDIFYKFSAYIKNTKQQ NNAALERGLTKALKKVDYLNTPLPQE RDAYTCGEDKGTRRFLDGDDELTLAD CNLPLKLVVVKIVGKKYRNYHIPADMT GLWRYLKNAVARDEFTNTCAADSEIEL AYADVAKRLSRS
4973	13024	A	5849	1	654	WEGPTCSMCKVIGIHNACEEAPLHSVFI GQKTELNNCISMLVAANDRVHTITQLE DSRRVTKENSHHVNR/KLSQKFDLYAIL DEKKSELLLRISQEQEKKLIFIALIQYQ EQLDKSTKLVEIAQSLDEPGGATFLLTA KQLIKSIVEASKGCQLGKTEQGFENMDF FTLDLEHIADALRAIDFGTDEEEEFIEEE DQEEEEESTEGKEEGHQ
4974	13025	A	585	334	696	IKPEMEAGISVTLGLDRNTRVQVGCREL RSTKYISGWASCTSIQPSGRELVCVVGE CLPLPVVPNWIGGGYGTKYWSRRSSQ EWAVCSMDKTRYPEDSQLQCQDGSTR YKITVSSLPAS
4975	13026	A	5850	141	626	LLWILIAAPPPPPVIRNGARGCSPSTTIP NAWQEPPrPRERPPPPPSRDAAGATPS FLPPPLRNHRDSIHHCSGL/CLDDFESK YSFHPVEDFPAPPEYKHFSEDYPSKTNR AARGVAPPLPILQVKPGLVPFLIKRMDL LFFSYGPLHSSELLHDSS
4976	13027	B	5851	23	160	MQHVCAMRQVDIDAYTTCLYASGTPV PQLPLLLMALLGLCTLVL*

4977	13028	A	5852	221	1645	APRMRL LAWIFLANWGGARAEPGKF WHIADLHLDPDYKVSQDPFQVCQSAGS QPRGPTQAPWGDYLCDSPIWALINSSY AMKEIEPEPDFILWTGDDTPHVPDEKLG EAAVLEIVERLTKLIREVFPDTKVYAALG NHDFHPKNQFPAGSNNIYNQIAELWKP WLSNESIALFKKGAFYCEKLPGPSGAGRI VVLNTNLYYTSNALTADMADPGQQFQ WLEDVLT DASKAGDMVYIVGHVPPGFF EKTQNKAWFREGFNEKYLVVRKHHRV IAGQFFGHHHTDSFRMLYDYAGVSISA MFITPGVTPWRTTLPGVVNGANNPAIRV FEYDRATLSLKDMVTYFMNLSQANAQG TPRWELEYQLTEAHGVPHATAHSMHT VLGRIVGDKSTLQRYIVYNSVSYAG VCDEACSMQHVCMARQVDIDATTTCL YASGTTAVPQLPLLLMALLGLCTTRAV TCQAHSSW
4978	13029	A	5853	3	126	AYGDSMCAKCVSDRIKHAFFIKEQKIIV KVLKAQAGSQKAK
4979	13030	C	5854	306	386	MLFLKAIWGGSDSWSREAACPLNCNL*
4980	13031	A	5855	709	1199	AGVGVRGTTGRLVVRKFLTIFGNPLFL VAPPKPHSEWSQRLTYRRRPSPYNTAL* QK/RRHRSHNQIPPRIVYLLYPRLGKHP NSACGVCPQREFEGVRAVRPKVLMRL SKTKKHVSRAVGGSNVCLNVFRDRIKR AFLIEEQKIVVKVLKAQAQSQKAK
4981	13032	A	5856	1	219	HRGYLLFNLFVEVISSEQSVLAPPVRR*T CIVANLRGVGDPTSRHCAQGLGFKLLT LYSLLVGSESWGGARA
4982	13033	A	5857	112	312	LCTVCLWALKAGVGPEPERLIYSVPVFV */HAVCAGIADGGSFSSKVRCLIEFFYTG ISIKMFLYIK
4983	13034	C	5858	133	237	MFMDXXXXXXGGRFKGSLGGPKFTRAC KVKFFSL*
4984	13035	C	5859	61	177	MRIHKRLIDLHSPSEIVKQITSISIEPGVEV EVTIADA*
4985	13036	A	586	258	382	
4986	13037	C	5860	100	153	MSPPKSKGPFPRFPGRF*
4987	13038	C	5861	142	195	MSPPQSKGPFPPKFPGRF*
4988	13039	A	5862	11	90	
4989	13040	A	5863	3	759	TVPLEVVLLRKVGAAGGARGVIRLLDW FERPDGFLLVLERPEPAQDLDFITERGA LDEPLARRFFAQVLA AVRHCSCGVVH RDIKDENLLAVLRSGELKLDFGSGALL MDTVYTDFDGTRVYSPPEWIRYHRYHG RSDTVWSLGVLLYDMVCGDIPFEQDEEI LRGRLLFRERVSPECQQLIRWCLSLRPSE RPSLDQIAAHPWMLGADGGAPEQ/DCDL RLCTLDPDDVASTTSSSETLLRSLHTGS
4990	13041	A	5864	1	422	
4991	13042	A	5865	2	435	ILAEFGSLHLEFLHLTELSGNQVFAEKVR NIRKVLRKIEKPFGLYPNFLSPVSGNVV QHHVSVGGLGDSFYEYLIKSWLMSGKT DMEAKNMYELET/HKLGPEAFWFNS GREAVATQLSESYILRPEVVESYMYLW RQTHNTK
4992	13043	A	5866	1	837	
4993	13044	A	5867	1	415	TKLGPEAFWFNSGREAVATQLSESYIL RPEVVESYMYLWRQTHNPIYREWGW VVLAEKYCRTEAGFSGIQDVYSSTPNH DNKQSSFFLAETLKYLYLLFSEDDLLSL EDWVFNTEAHPLPVNHSDSSGRAGGRH

4994	13045	A	5868	1	1187	ESFHLNVSGEASLFEVNIYIGGLLSAFY LTGEEVFRIKAIKRLGEKLLPAFNTPTGIPK GVVSFKSGNWGWATAGSSSILAEGSLH LAEFLHLTELSGNQVFAEKVRNIRKVPQV SFEKPFGLYPNFLSPVSGNWVQHHSFG GLGDSFYEYLIKSWLMSAKTDLEAKNM YYG/APLEAIETYLLNVSPGGTTYIAEWR GGILDHKMGHLACFSGGMIALGAEDAK EEKRAHYRELAVQITKTCYESYARISDTK LGPEAFWFNSGREAVATQLSEE/YTYILR PEVVESYMYLWRQTHNPASYREWGW VVLALKEYCRTEAGFSGDSKTCYSRHPQ PRTTSRQSFFLAETLNRCLVSACNGPDTG LEARDTAESETVISPAVKGSRGKAMVR ETD
4995	13046	A	5869	1	1561	MIFVVIILMVVLSPEGGSGLDSSPFLSEA NAERIVQTLCTVRGAALKPYPTGPNFR YSHGVPPHLFAYFPPGSTVSQDNSFISPO LQHIFERVRQSADFMPRWQMLRVLEEL GRDWQAKVASLEEVFAAASIGQVHQG LLRDGTEVAVKIQYPGIAQSIQSDVQNL AVLKMSAALPAGLFAEQSLQALQQELA WECDYRREAACAQNFRQLLANDPFFRV PAVVKELCTTRVLGMELAGGVPLDQCQ GLSQDLRNQICFQLLTCLRELFEFRMQ TDPNWANFLYDASSHQVTLLDFGASREF GTEFTDHYIEVVKAAADGDRDCVLQKS RDLKFLTGFETKAFSDAHVEAVMILGEP FATQGPYDFGSGETARRIQDLIPVLLRH RLVSPPEGDLWPWHRKLAGAFLACAH LRDHIACRDHKPGHLPPLGQSPARRSH CRQPPHQRGTPGWPHDSLHGGFSPQSR PYPAVVPLIPSPSALGQSPGLPLSLAWL SSLAPKTQESLGLGNSP
4996	13047	A	587	1637	1832	VFSTRCGTHPPVCLAEFVKRLRYCEYLG KYFCDCHSYAESCI PARILMMWDFKK YYVSNFSKTA
4997	13048	A	5870	1	1532	MPQALERADGSWAWVLLATMVTQGL TLGFPTCIGIFTELQWEFQASNSETSWFP SILTAVLHMAGPLCSILVGRFGCRVTVM LGGVLASLGMVASSFSHNLSQLYFTAGF ITGLGMCFSFQSSITVLGFYFVRRRVLAN ALASMGVSLGITLWPLLSRYLLENLWGR GTFLVFGGIFLHCCICGAIRPVATSVAPE TKECPPPPETPALGCLAACGRTIQRHLA FDILRHNTGYCVYILGVMWSVLGFPLPQ VFLVPYAMWHSVDEQQAALLISIGFSNI FLRPLAGLMAGRPAFASHRKYLFLSALL LNGLTNLVCAASGDFWVLVGYCLAYSV MSGIGALIFQVLMDIVPMDQFPRALGLF TVLDGLAFLISPLAGLLLDATNNF*DVF QQCPSFFP*SKAPLLKGGSFPPPPQKKEQ GKQAVAADALERDLFLEAKDGPQKQR SPÆIMCQSSRQPRPAGVKNHLWGCPAS SRTSHEWLFWPKAVLQAKQTALGWNSP T
4998	13049	A	5871	946	1279	QTELGVRFPTLPFLLSARGCSGFRVLF VDFRVQPGFRKENLIQGDLLFMNRCQSS RQPRPAGVKNHLWGMSCP/ASRDPAMK WLLWPKAVLQAKQTALGWNSPYLECP V
4999	13050	A	5872	3	297	ESCSVTQAGVHW/CNLGSLQSPDPDSSD SPSSVSRVAGITGMCHHAQLIFVVFVETG FHHGEAGLCLRLPKCWDYRCEPPRLHL GLQLNFTYKDRCLA

5000	13051	A	5873	276	880	KADSEQHGEAKRRYSSSLAKKEVSKAPE DKKKRLEDDKRKKEDKERKKKDEEKVK AEEESKKKEEEEKKKHQEEERKKQEEQA KRQQEK\EA\AAHMKEKEESIQLHQEAW RHHLKKELCSKNQ\NAPGSRPKENFFSRL DSSLKKN\TAFVKKLKTPEQQRDSLSHD FNGLNLSKYIAEAVASIVEAKLKISDVNC AVHLCS
5001	13052	A	5874	2	619	LDLDFNAILIVTSLAPFFQDCMSENALH ELNIELLRNKLYKSYLEAFYKFCCKNHGD VTAEVMCPILEFEADRRAFIITLNSFGTEL GQ\EDRETLYPNLGQLLSEGFAL\LAQAE DFDQMKNVADHYGVYKPLFEAVGGIGG KTLEDVFYEREVQMNVLAFNRQFHYGV FYAYVKLKEQEIRNIVWIAECISQRHRTK INSYIPIL
5002	13053	A	5875	1842	2306	GPRRLA\AFLT\SAGDGVYTRPVVFHDCTC ATFHREDA\YRLPFIPTNHHTASPE*VPP H\PHLGALQLPGDPSHDIHSIGTPNSNADA PKAGGCKWTQTRSVVPNSALGRKGSTH LPRIYTFTLALPETKLSNCPKAPPIGLEH TSLAWALGTAD
5003	13054	A	5876	301	471	
5004	13055	A	5877	269	394	
5005	13056	A	5878	524	604	
5006	13057	A	5879	187	401	VSCPGSNSPLGSSSASGASSLNFLPSVPV R*SVSGLNLRVPAMARAVTISGDVTKA WVSGFASLRPVKFL
5007	13058	A	588	1	856	MKRSM\TLTIFHSEIRILRN\RQPPPKESWE DIEDFGETH\DLKQY\GDFENGIPVHDTI ARV\VCISPAKFHECFINW\MRDCHSSND KD\VIDGKTLRHSYDKSRRRGAIHVISA FSTMHSLVIGQIKTDKKSNEITAIPELLN MLDIKGKIITTDAMVNCIVKVTGVFAING DQRVAEPDSGALCQVRYPGNHRNDQRY LFRHSDSELLHWM\VALDA\AVKRVKCL WMSLHKVYSCI\ELPELPQESAGHSGSQ YA*CNRT\RPHGQKPGTSAPGSSGVWRIT SV
5008	13059	A	5880	667	888	AHTVHIRRSASRLPAGPASRLVDLSH*DL GHVP/AGFFLIMNVQ\QEG\ADLSTSAHL LGAPLVKGS\RP\HAWADAW
5009	13060	A	5881	1	163	GLVDES\VDTSPTGPSSADATTSVRAAK KRAPYTLVGSISEPGLGLISWWTSN
5010	13061	A	5882	183	426	
5011	13062	A	5883	1	1152	MHNSDGIEVMRQQKAEIGRVGGLEGIQL GVTEVIVNGARMLESYNCKAELGATGL VNYQISVKCSNQFKLEVYLLNAENKVV DNQAGTQ\GQLKVLGTNLWWPYLMHEH PAYLYSWEGRPDGAQAVGALTPGTLAV EVWLT\AQKSLGP/SDFYTLPVGLRTVAV TESQFLISGKPFYFHGVNKHEDADIQK GFNWPLLVKDFNLLCWLGANTFCTSHY PYTEEM\QICRYRGIVVIDECPAPSGHT GPSVPSLLARWQLFNNVSMHHHMWVV EEPVL\RDKNHPAMVMWSLAKEPASFLE SAGYSFKSLTMEQTARVLDLDTGEAVLQ YRSLPRGAHKT\LGKKRKISSYNVDLTSC QLAKEKCLKGPS\FLQSRQERMNSELRD N
5012	13063	A	5884	401	882	CTNTPPTWTRGRMVIAHTKALDPSQPV FVTNVTYAADKGALYVDVTP\LSYYS YRNYGHL\ELNQLQLAA\QFENWCKTSQ SHYSERVWSGNAL*GFHQDPPLMFQ*RG PGKVLLEQYHLGLDQKRRKYVVGELIW NFADFMTNQCVSFLVGNENSANL

5013	13064	A	5885	197	1184	ETSHQVMDRSNPVKPALDYFLNRLVNY QISVKCSNQFKLEVCLLNAENKVVDNQA GTQQQLKVLGANLWWPYLMHEHPASL YSWEGRPDGAQAVGALTPGALAVEVR LTAQKSLGP/SDFYTLPVGLRTPVPTESQ WALYVDVIRVNSYYSWYRNYGHLELIQ LQLPAQFENWCKTSQSHYSERVWSGNA YRVSPGGNLPALPCCSQNLALPTFSP GTVVISLALSLIGLWAQETGVLFIVVSQD PPLMFSEYQKSLLEQYHLGLDQKRKY VVGELIWNFADFMTNQCKWQFSAWDN VPVLIFSGCLAHSFGCKNIGNKGGKL V
5014	13065	A	5886	1	657	
5015	13066	A	5887	76	614	VCQYCTARMADFGISAGQFVAVVWDKS SPVEALKGLVDKLQALTGNEGRVSVENI KQLLQCLVPGSTTLHSAEILAEIARILR PGGICLFLKEPVETAVDNNSKVKTASKLA CSALTLSGLVEVKELQREPLTPEEVQSV REHLGHESDNLLFVQITGKKPNFEVGSS MQLKLSITKKS
5016	13067	A	5888	102	1292	ACQYCTARIVDFEISAGQFVA*VWDKSS PVEALKGLVDKLQAF/TPGNEGRVSVENI IK\QLLQ\SAHKESSFDIIL\SGLVPGKAPL WHS*DFWAGNPPGFLRPGWMFFFLKE PVETAVR*Q*AKWKTASKLCSALTLSGL V/EKLELQREPLTPEEVQSVREHLGHES DNLLFVQITGKKPNFEVGSSRQLKLSITK KSSPSVKPAVDPA*AAKLWTL*ANDMED DSMCIFCGCSLTHRWPLEHVRLNMMI NQKEDRVDFTFFLDSKFPLEACSHFSFSL AETTTVSLIALNTLQDLIDSDELLDPEDL KKPDPASLRAASCGEKKRACKNCTC GLAEELKEKSREQMSSQPKSACGNCYL GDAFRASCOPYLGMPAFKPG*EKVLLSD SNLHDA
5017	13068	A	5889	1	747	MGRFYVAQAGLELLSSDPSIPSSKTLQEQ NDQSYPSLTPVFPEVALHTLLWGEDANN SKVKELQREPLTPEEIQSVREHLGHESDN LLFVQITGKKPNFEVGSSRQLKLSITKKS SPSVKPAVDPA*AAKLWTL*ANDMEDDS MDLIDSDELLDPEDLKKPDPASLRA*AS CGEGKKRACKNCTCGLAEEL*EKEKS EQMSSQPKSAICGNCYRGAMPSGCASCP YLGMPAFKPG*EKVLLSDSNLHDA
5018	13069	A	589	148	333	
5019	13070	A	5890	2	152	YRHMAPHPTNFKK/FFCRDGGVLMLPR LVFNSWPQGILLPQPKVLGLQV
5020	13071	A	5891	1	581	EKQSCKSCGETFNSITKRRHHCKLCGAVI CGKCSEFKAENSRQSRVCRDCLTQFVA PESTEKTPTADPQPSLLCGPLRLSKSGET WSEVWAAIPMSYPQVLHLQGGSDGRL PRTIPLPCKLSVPDPEERLDSGHVWKLQ WAKQSWYLSASSAELQQWLETSTAA HG\DTAQ\DSPGALQLQVPMGAAAP
5021	13072	A	5894	1	303	PCGARQCGGPPPR/LCSSRRTSQELLSK PVPPPAPGGPASRVGRGSVSGALSPAWN GERQHHRGVVLTHPQSPNHQAGSPNPN TRQALATLSVPNKPPIE
5022	13073	A	5895	1	284	ATESCSVAQVGQWCDLSSLQAPPPGFT PFSSLSLQGSWDYRSPPPHPANFFVVLVE /MASASQSAGITGVSHRTRPRIAIFNLTEN TNGSVDED
5023	13074	A	5896	3	338	GIHGWSYGGYLSLMALMQRSDIFRVAIA GAPVTLWIFYDTGYTERYMGHDPDQNEQ GYYLGSVAMQAEKFP/ETPQERHSIRV PESGEHYELHLLHYLQENLGSRIAALKVI
5024	13075	A	5897	1	1200	

5025	13076	A	5898	2	594	NRGSCHRGLKFEGAFKYKMGQIEIDDQV EGLQYLASRYDFIDLRVGIHGSYGG YLSLMALMQRSDFRVAIAGAPVTLWIF YDTGYTERYMGHPDQNEQGYLGSVA MQAEKFPSEPNRLLLLHGFLENVHFAH TSILLSFLVRAGKQYDLQIYPQERHSIRV PESGAEHYELHLLHYLQENLGSRIAALKV I
5026	13077	A	5899	74	248	KTLWMVNRTVLGICSQQLSAGTAT/DV SKHRLQGFIPCRIPS/ASPQTQRKFSLQFH RNC
5027	13078	A	59	582	1303	GACSRAGLWLLGQGLLGPRIYQLSEDCV SWSCVHQPLSPQSLIWARTELSPTQS GEDRKTSFVGHQPTALGGLQQSIESLMS SEAETEERRCTWMQLSETNRTLFLFGVT KYTAGPYECEIWNSSASRSDPVTNLNL HGLDALTISSSYTYHTGEVPKLSCLDT HPLAEHSWLIGGKFQQAQVFFIPQITKT YRGVYVCFIHNSATGGTNLIKRIIVPDHS LRSALSLEVTGS
5028	13079	A	590	311	576	
5029	13080	A	5900	258	552	CMVFHD/VSGACCCNGETTGKISGGGNQ LGSSPIGGPNPS/SGSSQTSISGDVVEACC SVLSMVCADPVYKVYVAALLLERELPG VFSGKIFNLLSDCLLW
5030	13081	A	5901	1	1660	
5031	13082	A	5902	1	1947	MALRRLSHDVSGALLANGESTGNSGG SSGSSPSGGATSGSSQTSISGDVVEACCS VLSMVCADPVYKVYVAALQCMMLVTL EDPSSHFRMRRRLM/AYADEVEIAEAIQ LGVEDTLDGQQDSFCRHLFPTTIWKPQR TVP/LECTIHLEKTGKGLCATKLSASEDI SERLASISVGPSSSTTTTTTEQPKPMVQ TKGRPHSQCLNSSPLSHHSQLMFPALSTP SSSTPSVPAGTATDVSKHRLQGFIPCRIPS ASPQTQRKFSLQFHRNCPENKDSKLSP VFTQSRPLPSSNIHRPKPSRPTPGNTSKQ GDPSKNSMTLDLNSSSKCDDSFSGSSNS S/NCCYTSDFTVFTPVEEKRLDVNTEL NSSIEDLLEASMPSSDTTTFKSEVAVLS PEKAENDDTYKDDVNHQKCKEAMEA EEEEALAIAMAMSASQDALPIVPQLQVE NGEDIIIIQQDMTFRHIIPPIQWIYKESA NLLIDSTGQRLRIADFGAAARLASKGTG AGEFQGGQLLGTIAFMAPEVLRGQQYGRS CDVWSVGCAIHEMACAKPPWNAEKHSN HLALIFKKLLDFANTACDGDKESEVEDV ETDSGNPEDLRKEIMIGLQYQAEIPPYL GEYDGNEDKSPQPKMTGVQNAKEVLS T
5032	13083	A	5903	1	4491	PSPEAGGGGGALKASSARAAAAGLLRE AGSGGRERADWRRRQLRKVRSVELDQL PEQPLFLAASPPASSTSPSEPADAAGSG TGFQPVAVPPPHGAASRRGAHLTESVAA PDSGASSPAAAEPEKRAPAAEPSPAAA PAGREMENKETLKGLHKMDDRPEERMI REKLKATCMPAWKHEWLERRNRGPV VVKPIPVKGDGSEMNLAAESPGEVQAS AASPASKGRRSPSPGNPSGRTVKSESPG VRRKRV
5033	13084	A	5904	1940	2062	
5034	13085	A	5905	785	892	
5035	13086	A	5906	1	2745	
5036	13087	A	5907	1	3297	
5037	13088	A	5908	1	2202	
5038	13089	A	5909	1	2868	

5039	13090	A	591	279	602	FFLSEILSVSLTFFIISNYYYQSQVINS LAVY RHRETDFGVGVDRDHPGQ/PWQNPISHEK LDNLIIIIIGFLRRYTFNILFCTSLCVSILT FCRGILVITNKNKLYKTK
5040	13091	A	5910	1	3237	
5041	13092	A	5911	1	2001	
5042	13093	A	5912	1	2982	
5043	13094	A	5913	1169	3269	VHCRFWILALCQMSRLQKSPLLFNIVLE VLAKAIKQEKEIKGIQLGKEEVKLSLFAD DMIVYLENPTVSAQNLLKLMSNFSKVSG YKINVQKSQAFLYTNNRQTESQIMSGLP FTITSKRITYLGIQLTRDVKDLFKENYKP LLKEIKEDTNKWKNI PCSWVGGRINLVK MAILPKVIYRFNAIPKLPMTFFTELEKTT LKFIWNQKRALIAKSSLSQKNKTGGITLP DFKLYYKATVTKTSWYWYQNRDIDQW NRTEPSEIMPHIYNLIFDKPDKNKQWG KDSLFNKWCWENWLAICRKLKLPFLT PYTKINSRWIKDLHVRPKTIKTLEENLGN TIQDIGMGKDFMSKTPKAMATKAKIDK WDLIKLSFCTAKETTIRVNRQPTWEKI FATYSSDKGLISRIYNELKQIYKKKTNNPI KKWAKDMNRHFSEEDIYAAKHKMKKC SSSLAIREMQIKTTMRYHLTPVRMVIKK SGNNRCWRGCGEIGTLLHCWWDCKLV QPLWKS VWQFLRDLELEIPDPAIPLGI YPEDYKPCCYKDTCTRMFIAALFTIAKT WNQPKCPTMIDGIKKMWHIYTMEYYAA IKKDEFMSFAGTWMKLETHLRKLSQGQ KTKHRMYSLIGGNLTMRFTGHSAGSHH TPGPIMRCGAGGGIALGEIPNVNDELMG TANQHGTCPMQQNCTLCTCTLKLKV
5044	13095	A	5914	2821	5794	
5045	13096	A	5915	457	651	
5046	13097	A	5916	3	637	KGDHVKHYKIRKLDNGGYITTRAQFET LQQLVQHYSERAAGLCCRLVVPCHKGM PRLTDL SVKTKDVWEIPRESLQIKRLGN GQFGEVWNGTWNNGNTKVAIKTLKP GT MSPESFLEEAQIMKKLKHDKLVQLYAV VSEAPIYIVTEYMNKGSLLDFLKDGEGR ALKLPNLVDMAAQVAAGMAYIERMNYI HRDLRSANILVGNGLICK

5047	13098	A	5917	1	2523	MHWKRPWQVGGYLTAAATDTVQMLNY MSVRQLSYLNFPNTWQFLSWSQMPTQQ AYPCVTHTHTPVLGQMACCISNQRRTA ALIGTGRPERNVHVNLRQGFVVNAHEP WVNEKVARQEPEDAGRGAVNRAWGFS PRLIHWSEGPQAAALGDRDPRWLPHYH AAALSGSHAAALSLAPSRSSALAVLIALL PAAQLHHHVPRSKACDIAYVGGHRRQV WYGQEDGQQILVVPVLLSTTQKVSAL WADRLELRALLARSLAARLAPPSVHPCW V/VTFPSAVAWINAGSLDLFLKDGEGRA LKLPLNLDMAAQVAAGMAYIERMNYIH RDLRSANILMGNGLICKIADFLARLIED NEYTARQDPTRSRGHRSSAMNPYGSRA GRGRVESGLTLQMAATQVTVQWSAHLV SGEAVAWNTFPTANQDRKELAAALSCSCP STLCFMLLGLYPTLDHLQVRQSHCLTVS CAWQGLKPLFLWLAINKAEEICLTLLKY WQADCELLASAYQHAWHTCARTQSSNL SIADIESLELVVKTFHQKKIFGLTSYSG MFVGTWNGNTKVAIKTLKPGTMSPEFSL EEAQIMKKLKHDKLVQLYAVVSEETIYI VTEYMNKGGDEGTIREEIGQVKAPRRDN IPKPSAAHAAQLVMWHEVRLTRALCPF WGWLDSWHHFCVELHPTHPLITQKPKG KELTDVVHRSQFSGAQSRVESIWIQRSM TKTPGAKLQKQAYQGVSNPHHHHTGQ QLKAVPHPLMEAPDAIDGYRKILVNFTKI YSAFAVTNSDYEWQPTLVAIGYRCGDP QGTERRTQKPPEVTTQLQPWPWLLRG HVGLVLLDHPFIFKEKP
5048	13099	A	5918	74	1002	SNESNAVALSTVERTARRDAPQHGTQPR GLPRSSEPHPAQRTAATGKARQRRKTTA SAGAREGRRRLAGTTSIPGP/SAVPVHR HRPQEPQGPRTIPRAEEKRDQMASHV ECRPLGVFECELCTLTAPYSYVGQKPPN TQSMVLLEESYVMKDPFTSDKDRFLVLG SCCSLCSRLVCVGPVGRMEVEQHGFHSV PSVLRVTPSEKSLSICHLTHTKGSCINS QGDEMGGGRSLRSVAWEYLRLMEELV VQEKLGKEDCKGNSARLGEKESSIKEDP QPARFSDGPGLECCSDVTERDDLQQG SS
5049	13100	A	5919	3	401	RSRGTRAAMASHVECRPLGVFECELCTLT TAPYSYVGQKPPNTQSMVLLEESYVMK DPFTSDKDRFLVLGSCCSLCSRLVCVGP VGACSLFYSKRFCLPCVRENINAFQEIQR DLEKRKAPSKRTPSQPGSRT
5050	13101	A	592	66	1474	TAPPPSPSPSSLLSPCNGVHHVSTQPSCP GRGKMSKLLNPEEMTSRDYFDSYAHF GIHEEMLKDEVRTLTYRNSMYHNKHVF KDKVVLGVGSGTGILSMFAAKAGAKK VFGIECSSISDYSEKIIKANHLDNITIFKG KVEEVELPVEKVDIISEWMGYCLFYES MLNTVIFARDKWLKPGGLMFPDRAALY VVAIEDRQYKDFKIHWWENVYGFDMTC IRDVAMKEPLVDIVDPKQVVTNACLKIV WTLIRGGPGCAGSPAVPPWSPGNAGSCT APTWARAKVVRLRYEPEVRLEGHATLV TEGTTKERYQGPWKEPGAWLIGPEKVM EKSVLTPNVILDASYCWELAYQKIGEGV VWFYITGGPDKTQIAVLVQQEVDIYTV KTEELSFTSAFCLQIRNDYVHALVTYF NIEFTKCHKKMGFSTAMEEPCIFVLSK EKVNNVVVVTAQVESVLDEGEAG

5051	13102	A	5920	96	615	NIILRNSIITSRKIKYTTLSSTHSIFLFPQISF QMSLIGFFYESEANKGSHFFPGYVSCNLN AETT/SLFYYICFLKSPDQGGQNAQTMA NITPLRRA\VECVQDQFGFINYEVDGSK KILFFHMKV/SRDGQCSAWNVPSSLR GPKA\VAAPR\DR\VSRLKNITL\DDAS DPR
5052	13103	A	5921	1497	2853	EMVLVSSSVWVWVFCSSSTSVKFWMG SSHIADEVEFTVVPDMLSAQRNHAIRIKK LPKGTVSFHSDDHRLGTVEKEATFSNP KTTSPNKGKEKEAEDGIIAYDDCGVKLT AFQAKDVEGSTSPQIGDKVEFSISDKQRP GQQVATCVRLGRNSNSKRLGYYVATL KDNFGFIETANHDKIEFFHYSEFSGDVDS LELGDMEVYSLSKGKGNKVS AEKVNT HSVNGITEEADPTTYSKGKVRPLRSVDPT QTEYQGMIEIVEEGDMKGEVYFPGIVGM ANKGDCLQKGESVKFQLCVLGQNAQTM AYNITPLRRATVECVKDQFGFINYEVDG DSKKLFFHVKKVQDGVLELQA\GDEVEF SVILNPAATGKVQAPCNVWR\VEGPP RLLQAPRPDRVGSIRLKNITLDDASAPR LMVLRQPKGDQITSMGF\GAERKVRQA GVID
5053	13104	A	5922	23	206	
5054	13105	A	5923	1	267	ALFRDKLKHMGKSTRRKLFELARAFSEK TKMRKSKRKHLKHQSRLGAAASTANL LDDVEGHACDE\NFRGQASRRAPQGGG RPCREGQ
5055	13106	A	5924	1	267	FFFFLTDILLF/CLFLRWSFTVTQAGVQ WSDLGSLQPPPPRLKQFSCSLSSWDH KCLAPRPANFCSFSKDGVSFCWPGWSQT PHLR
5056	13107	A	5925	1	325	MGTSSGSWPRWSVTAMPPTSMRPSRR SSSCWPCIPRLPASTAP*SMRPHSGPRMT TRSCLKT/RSYADGYSPPLNVAQRYVVA/ W*GTQEKVMPGRLAIPQRHRAGQQR
5057	13108	A	5926	366	489	QETTWPDLTKWLP*RPWMGMSSGF ARWSVTAMPPTSE
5058	13109	A	5927	228	754	
5059	13110	A	5928	1	2709	
5060	13111	B	5929	76	925	XQCFFLSADSRIAELLTELHQLSKQTQEE RSRSEHNLVNIQKTHERMQTKISPPY RTKLRLGLYTAKADAEAEENILRKALD MIAEIKSLLEERRSAAKIAGLYNDSEPPR KTMRRGVLMTLLQQSAMTLPWIGKPG DKPSQSSPLVLAASKALQVLLGFLLYN LPCLSHRHPQFLSRLRLPLYSGDCISQE CLNLVLLADVWFGFLPSIYLVFLIILYEG LLGGAAYVNTFHIALETSDEHREFAMA ATCISDTLGISLSGLLALPLHDFLCQLS*
5061	13112	A	593	379	475	DLQGVNHLRP\GVQDQPGQHGETLSLLK IQNN/LARRGGGRL/QSQLRRLRQDNRL NPGGGGCSEPRSRHCTPAWVTEQDPISK QNKRQQANFLIWEDFPYIPQGTKLIFTAQ KLPRCK
5062	13113	A	5930	3	1066	GSWGYQPTGLYAPTRR\GLNVILDWVQA HFPTDDFALAEFDGTNL\YEHSDPREGYH QDWNTLIYNYGRREVSNFLVGNALYWI ERFGIDALRVDAVASMIYRDYSRKEGE WIPNEFGGRENLEAIEFLRNTNRILGEQV SGAVTMAEESTDFPGVSRPQDMGGLGF WYKWNLGWMHDTLDYMKLDPVYRQY HHDKLTGILYNYTENFVPLSHDEVVH GKKSILDRMPGDAWQKFANLRAYYGW MWAFFGKLLFMAAKIAGLYNDSEPPR KTMRRGVLMTLLQQSAMTLPWIGKPG DKPPPLCGAIPASGDYVARPGDRLLARL

						KPLNGERAVDSLPEGGQVTAIATQQGM R
5063	13114	A	5931	53	506	FFVFLVEMGFHHVQGAGLELLNSSDLPS SASQSAG/TYRCEPLCPAFFFFSETESRSV AQAVVQWCDLSSLQPPPHFKRFFCLSL LSSWDYRHVPPCLANFCIFVEAGFHHV GQAGHKLLISSDPPASVSQSAGITGMSHC IQPHSPVFS
5064	13115	A	5932	1	346	SANATTKTSETNHTSRPRLKNVDRSTAQ QLAVTVGNVTVIITDFKAEKTRSSSTSSST VTSISAGSEQOMQSSSGVQRAPDKGLPP RSLPTPKGDMSAVNDEIFPEIATWNCEK L
5065	13116	A	5933	1	915	MGKEKTHINIVVNGHIDSGKSTSTGHLY KCGGINKRSIKKFEKKAEMGKGSFKSF VCDSSWYIPGHRDFITNIFTGTSQADCAV LVVAAGVGEFEAALLQDVYKIGGIGTV PDGQVETVALKPGVVITFAPVNTTTEVK SVKMHHEALSEAFSGDNVGFHVKNVSV KDIHCSNAGNCKNDPPMEAAGFTAQVI VLNHPGQ/DCHMAHIACKFAELKEKIDR SSGKKLEDGPKFLKSGDVAIIDMVPGKP MCVESFSDYPPLGCAACDMRQTVVALG VIKAADKKAAGAGKVTYPQKAQKAK
5066	13117	A	5934	1	759	
5067	13118	A	5935	30	706	KLPLKAKMGKEKTHINIVVIGHVDSGKS TTTGHLYKCGGIDKRTIEKFEKEAAEMG KGSFKYAWVLDKKAERERGITIDISLW KFETSKYYVTIIDAPGHRDFIKNMITGTS QADCAVLIVAAGVGEFEAVIFKNGQ/TR EHALLAYTLGGKQLIVGVNKMDSPEPPY SQKKYEEIVNEVSTYIKKIGYNPDTRAFV PISGLNGDHMLEPRANMPWFKGWKSH
5068	13119	A	5936	1	706	QSEQPCALPSRESTKLGIGTVSSAPMET VGFSPGMVVTFAPSPR*QRKV\SAKMH HEAL\SEALS\GEQLGASNVKNVFCQGM FRPWQTVAG*PAKNDPTQWEASWLSL QVIL\NHPRPK*GAGPMPLYLDC\HTAHI ACK\FAELKEIDRR\SGKKLEDGPKFLK SGDAAIVDMVPGKPMCVESFSDYPPLG RFAVRDMRQTVAVGVKA\VDKKAAGA GKVTKSAQKAQKAK
5069	13120	A	5937	364	458	VIEHLVSQDGLDFL/NLVICPPRPPKVLGL QA
5070	13121	A	5938	1	266	EMESRSIARMECSGISAHCKLRLPGSH HSPASVSRVAGTTGTCHHARLIFY/LL ETGFHCVSHDGLHLL/NLVICPPRPPKVL GLQA
5071	13122	A	5939	1	201	PPTGP/PKLPDPVHLPFPGPPSAWALPG MSPPSPDPDRNKLRIIRILKNASLSYLQVE VFPYKMP
5072	13123	A	594	2	307	QAGV**WDLGSLQPLPRLKQFS/CILNP GNLSKEF*STKETKQNI FVGHISQTSKF AISLIQHPINMRSGTKTFMMV*GNKQRS KFPIWTFKIFPDMPLS
5073	13124	A	5940	2	142	ESIQDYKHLCDLSFCQLPPDPPLTVPQ THNARDQWLQDAFHISL

5074	13125	A	5941	1	432	IHDELSRAARA/PDGPRHAAGAANAGPA AGPRRPVNLDLSALAALRKEMLSAVGLR QLDMSLLCQLWGLYESIQDYKHLCDL SFCQDLSSSLHSDSSYPDAGLSDDEEPP DASLPPDPPPLTVPQTHNARDQWLQDAF HISL
5075	13126	A	5942	3	696	VSMGALGLEGRGGRLQGRGSLLLAVAG ATSLVTLLAVPITVLAVLALVPQDQGG/ LGFQKLPEEEPETDLSPLPAHLIGAPL KGQGLGWETTKEQAFLTSGTQFSDAEG ALPDGLYYLYCLVGYRGRAPPGGGDP QGRSVTLRSSLYRAGGAYGPGTPELLLE GAETVTPVLDPARRQGYGPLWYTSVGF GGLVQLRRGERVYVNISHPDMVDFARG KTFFGAVMVG
5076	13127	A	5943	1	743	MGALGLEGRGGRLQGRGSLLLAVAGAT \SLVTLLAVPITVLAVLALVPQDQGGV TETADPGAQAQQLGFQKLPEEEPETDLI PGLPTAHLIGAPLKGHGLGWETTKEQA FLTSGTQVSDAEGALPDGLYYLYCLV GITGRAPPGGGDPQGRSVTLRSSLYRAG GAYGPGTPELLEGAETATPVLDPARR QGFWPLWYTSVGFGLVQLRRGERVYV \NISHPDMVDFARGKTFFGAVMVG
5077	13128	A	5944	1	588	MGFLHVQAGLKLTSGHYQKKRMFSE NEENVKRMKTSEQINENICVSLERQTAFL EQVPESFEHLPLPEPPAPLPELVDKTRD TLPPQKPELKVKRVFRPNGIALTNWITKI NPKCAPEEK\YPLFLCHENSNNKLIWKKI GEIKALPLMACTLSQFLASNRYFTVQ SKDIFGRYGPFCDIKSIPGFSENL
5078	13129	A	5945	3	495	EDTGTFRYIESAGAVKKARGFLEFVEDF IQVSKNLIGKVGKNGKVIQEIVDKSDMV PVRIEGDSENKLPREDKDDRSRHRQDS RRCPGGRCRSVSGRRGRGGPRGGKSSIS SVPKDPDSNPYSVLDN/TESDQTADTDAS KSHHSTNRHTRSRRRTDEDAVL
5079	13130	A	5946	1	2065	MAELTVEVRGSNGAFYKGFIKDVHEDSL TVVFENNWQPERQVPFNEVRLPPPPDIK KEISEGDEVEVYSRANDQEPGWLAK VRMMKGEFYVIEYAACDATYNEIVTFER LRPVNQNKTVKKNITFFKCTVDVPEDLRE ACANENAHKDFKAVGACRIFYHPETT QLMILSASEATVKRVNLSMDHLRSIRTK LMLMSRNEEATKHLECTQLAAAFHEE FVVREDLMGLAIGHGSNIQQARKVPGV TAILEDDETGTFRYIGESADAVKKARGFL EFVEDFIQVPRNLVGKVGKNGKVIQEI DKSGVVRVRIEGDNENKLPREDGMVPF VFVGTKESIGNVQVLLLEYHAYLKEVEQ LRMERLQIDEQLRQIGMGFRPSSTRGPEK EKGYATDESTVSSVQGSRSYSGRGRGR GPNYTSYGTNSELSNPSETESERKDELS DWSLAGEDDRDSRHRQDSRRRPGGRGR SVSGGRGRGGPRGGKSSISSVQYRSNIH NCSTLKRIFLASDMNIVLKDPSNPYSLL DNTESDQTADTDASESHHSTNRRRRSRR RRTDEDAVLMDGMTESDTASVNENGLD DSEKKPQRRNRSRRRRFRGQAE\DRQPAI DFIYKEVEKVSLWQAKDVIEEHGPSEK AINGPTSASGDDISKLRTPGEEKINTLK EENTQEA AVLNGVS

5080	13131	A	5947	1	1876	MADVTVVEVRGSNGAFYKGFIKDVHEDS LTVVFENNWQPERQVPFNEVRLPPPD KKEISEGDEVEVYSRANDQEPGWWLA KVRMMKGFEFYVIEYAACDATYNEIVTFE RLRPVNQNKTVKKNITFFKCTVDVPEDL REACANENAHKDFKKA VGACRIFYHPE TTQMLLSASEATVKRVNLSMDHLRSIR TKLMLMSRNEEATKHLECTKQLAAAFH EEFVVREDLMGLAIGTHGSNIQQARKVP GVTAIELDEDGTGFRJYGESADAVKKAR GFLEFVEDFIQVPRNLVGKVIGKNGKVIQ EIVDKSGVVRVRIEGDNENKLPREDGMV PFVFGTKESIGNVQVLLLEYHIAYLKEVE QLRMERLQIDEQLRQIGRSYSRGRGR RGPNYTSGYGTNSELNPNSETESERKDEL SDWSLAGEDDRDSRHQRDSRRRPGGRG RSVSGGRGRGGPRGGKSSISSVLKDPDS NPYSLDNTESDQTADTDA/SESHHSTN RRRR/SIRRRRTD/EDAVLMDGMTDSDT ASVNENGLVTVAADYISRAESQSIQRNLP RETLAKNKKEMAKDVIEHGPSEKAING PTSASGDDISKAT/RVLRGEEKINPLKEE NTQEAAVLNGVS
5081	13132	A	5948	1	392	TESERKDELSWWSLAGEDDRDSRHQRDS WRRPGGRGRSVSGGRGRGGPRGGKSSIS SVLKDQPSNPYSLDNTESDQTADTDA SESHVSTNRRRRSRRRTD/EDAVLMDG MTESDTASVNENGLGKRCD
5082	13133	A	5949	269	973	PAACPSPANNICFYGECSYYCSTEHAEC GKPDQIEGSLGAFLPDLSLAKRKTWRN PWRRSYHKRKAWEVDPDYCEEVKQT PPYDSSHRILDVMDMTIFDFLMGNMDR HHYETFEKFGNETFIIHLNNGRFGKYSH DELSILVPLQCCIRKSTYLRLQLLAKE EYKLSLLMAESLRGDQEAPVLYQPHLEA LDRRLRVVLKAVWDCVERNGLHSVVD DDLDEHRAASAR
5083	13134	A	595	374	665	GAQGLSLSPRLECNGAILAHCNLCPLGSS NSPGSAS*VAGTIGMHHRMLMFVFLVE SGFHHVGGAGLELLTSSDPPASASQSAGI RGISRRAGLDF
5084	13135	A	5950	1	106	
5085	13136	C	5951	146	280	MVFKDQKMRFCFCNQXXXLMNLXXX XXXVLREKGGSPFVFL*
5086	13137	A	5952	2	1929	MAAAVDSAMEVVPALAEAAPEVAGL SCLVNLPGEVLEYILCCGSLTAADIGRVS STCRLRELQSSGKVWKEQFRVRWPSL MKHYSPTDYVNWLEEKVVRQAGLEA RKIVASFSCRFFSEHVPCNGFSDIENLEGP EIFFEDELVCILNMEGRKALTWKYYAKK ILYYLRQQKILNNLKAFLQPPDDYESYL EGAVYIDQYCNPLSDISLKDIAQAIDSIVE LVCKTLRGINRRHPSLTFFIAGESSMIMEIE LQSQVLDAMNYVLYDQLKFKGNRMDY YNALNLYMHQVLRRTGIPISMSLLYLT ARQLGVPLEPVNFPSHFLLRWCQGAEGA TLDIFDYTYIDAFGKGKQLTGKECEYLIG VQHVTAALYGAVNVKKVLQRMVGNLL SLGKREGIDQSYQLRDSLDLYLAMYP DQVQLLLLQARVYFHLGWPEKSFCLV LKVLDILQHIQTLDPGQHGAVGYLAVQ HTLEHIL/ERKKEEVGVEVKLRSDEKVR DVCYSINGLHYGRHKRYGL/N*LC*FYGW GPHLAWMGHELDNRNMNVHSLPHGHG QPFYNVLVEDGSCRYAAQENLEYNAEP VQESHAPDVGRVYSQRFTTRTHYPNAEL EIRYPEDLEFVYETVQNIYKCKRKENIE

5087	13138	A	5953	3	364	FFSPETESHCIAQAGVQWQMLGSLQSP PFSCSLSPSSYDYRHAPLHRANFLFLR DGVSAWCPATAPGLLLIFFGRAPWLMV IPAPREAEAGGSLEARSSRPASLFQVSFFS PFFHMF
5088	13139	A	5954	2	114	FFFFGRDK/SLTMLPRLVSNCAWQGLPS WPPEVLRLQA
5089	13140	A	5955	3	139	FFFFFETETHTVARAGVQWCHLASLQPL PAGSSHSPAAAASHVAS
5090	13141	A	5956	274	363	
5091	13142	A	5957	7	1047	
5092	13143	A	5958	7	960	
5093	13144	A	5959	2973	3400	GIIFMCPDMYTSTKTLKACLFALFFFIYP IYFFLVGIMEEYIKMCNIPQVGIFSFKYLP *SLSV*FFFETESCFVTQAGVLWCYSSL QPPPPGFKRFSCSLSSSWDYRHLPPCPA NFC/IFSRDGVSPCWPG*SQTPDLR
5094	13145	A	596	1	685	EIKYHSLPRLCEGRGEISAH*NLCPLGSSDS PATAS*VAGITGMRHYAQLIFLFLVET*F HHVQGWSRTPDSNDPPASASQAGDY RRD
5095	13146	A	5960	6459	7074	LEARAGSYRPDLPGSHYLLAFFFFFRRS LTLFSQAGVK\WCDLGSSQPPSPGFKQF SCLSLSSWDYRHAPPYRG*SFFFFFFFVF LVETGVSPCWARL\VLNARQVIHPPRAS QSAIGTTAVSHHAQPLCLFIYLFYFY/CIF LRLSFALGPQARVQWHNLSSLQPPPPGF KQFSCSLSPSSWDYRWPPPHANFVLL RYLR
5096	13147	A	5961	1	361	VCYPDRDCGESLVAASYRQVPVPHQCGW FHPLKPA/SHPDTVECVFRKTPKIPQKHS GSPRPPSPSYRGRFLFRFHPPQHGAQGP SPPPLGRKHRPSHTGSAALRACPPPGAA GLHSWGQL
5097	13148	B	5962	27	288	MRKVHVSTVTPNYAGGEPKRFRTAYTR QQVLELEKEFHYNRYLTRRRRVEIAHAL CLSERQIKIWFQNRMMKWKKDHLKLPNT KIRSGX*
5098	13149	A	5963	1	825	MSSFLINSNYVDPKFPCEEYSQSDYLPS DHSPGYAGGQRESSFQPEAGFGRRAA CTVQRYAACRDPGPPPPPPPPPPPPGL SPRAPAPPAGALLPEPGQRCEAVSSSP PPPCAQNPLHPSPSHSACKEPVVPWMR KVHVSTGRYSLSEVGSWGGVEEVEEEK EEESNPNYAGGEPKRSRTAYTRQQVLEL EKEFHYNRYLTRRRRVEIAHALCLSERQI KIWFQNRMMKWKK\DHKLPNTKIHSGG AAGSAGPPGRPNNGPRAL
5099	13150	A	5964	656	1164	
5100	13151	A	5965	1	4033	MWRRKHPRTSGGTRGVLSGNRGVEYGS GRGHLGTFEGRWRKLPKMPEAVGTDPS TSRKMAELEEVTLDGKPLQALRVTDLK AALEQRGLAKSGQKSALVKRLKGALML ENLQKHSTPHAAFQPNISQIGEMSQNSFI KQYLEKQOELLRQRLEREAREAAELEEA SAESEDEMIHPEGVASLLPPDFQSSLERP ELELSRHSRKSSESEEKGDSDDEKPRK GERRSSVRQARAACLSEGSQPAEEEEED QETP
5101	13152	A	5966	3	5979	KSSSISEEKGDSDDEKPRKGERRSSVRQ ARAACLSEGSQPAEEEEEDQETPSRNLRV RADRNLTKEEEEEEEEEEDDEEEEGD DEGQKSREAPILKEFKEEGEEIPRVKPEE MMDERPKTRSQQEVLERGGFRTRSQEE ARKSHLARQQQEKEMKTTSPLEEEEREI KSSQGLKEKSKSPSPRLTEDRKASLV ALPEQTASEEETPPPLLTKEASSPPHPQL HSEEEIEPMEGPAPAVLIQLSPNTDA

5102	13153	A	5967	16	208	LLPYSTNPPASASRLAVIAGVHHHTQLAF FLVETGSHCVTQSGKLKPASSNPPTGLT MLGLQV
5103	13154	A	5968	1	932	MKFLLDILLPLLVCSLESFVKLFIPKR RKSVTGEIVLITGAGHGIGRLTAYEFAKL KSKLVLDINKHGLEETAACKKGLGAK VHTFVVDSCNREDIYSSAKKVKAIGDV SILVNNAGVVYTSDLFATQDPQIEKTFE VNVLAHFWTTKAFLPAMTKNNHGHVIT VASAAGHVSVPFLAYCSSKFAAVGFHK TLTDELAALQITGVISLCLCPNFVNTGFI KNPSTSLGPTSSCSRVGPKLVPEEVNRL MHGILTEQKMIFIPSSIAFLTTLERILPERF LAVLKRKISVKFEAVIGYKMKPH
5104	13155	A	5969	1	1202	IHTGENPYECHECGKAFSRKYQLISHQRT HAGEKPYECTDCGKAFGLKSQLIHHQRT HTGEKPFECSECQKAFNTKSNLIVHQRT HTGEKPYSCNECGKAFTFKSQLIVHKG HTGVKPYGCSQCAKTFSLKSQLIVHQRS HTGVKPYGCSECGKAFRSKSYLIHMRT HTGEKPHECRECGKSFSFNSQLIVHQRIH TGENPYECSECGKAFNRKDQLISHQRT AGEKPYGCSECGKAFSSKSYLIHMRT GEKPYECNECGKAFTWKSLLIVHERTHA GVNPYKCSQCEKSFSGEITPSLLHQRMH TTEKPYECSECGKAFIRNSQLIVHQRT GEKPYGCNECGKTFSQKSILSAHQRT GEKPKCTECGKAFCWKSQIMHQRT VDDKH
5105	13156	A	597	3	198	GIPGSSFCGLCGDVPKPV*RADGSC*DG VAPRLLRPRGFRGGRCGPVLDLAGQRG AESGCRG
5106	13157	A	5970	153	571	LLVFYLPSTPSLKGGLRQLDMSLLCQLYS LYESIQEYKGACQAASSPNWYALENGF FDEEEYFPEQNSLHRRDRGPPRDLSP VAPPSPATGFWSPSRGSWEGCDCWEAL PTGHA VIICCFSCCKAPPLWTVLGHGRG
5107	13158	B	5971	223	347	XNYIRVFGGGTKLTVLGQPKAAPSVTLF PPSSEELQANKATL*
5108	13159	A	5972	2	283	LHSRLDGAACLPGHCHGSRVEVTYETH QCGLVGLKLLRGGREQSDRGGSGLT*D GQLGPPAEQRTTQAVIPCCAVIMSLRL EPTDGQGG
5109	13160	A	5973	3	231	RRQAQIAAGRVLVVALFGGCGGLHSRL DGAAI/CLPGHCHGSRVEVTYETHQCGL VGLKLLRGGREQSDRGGSGLT
5110	13161	A	5974	2	385	APFMRDPAAVASVGF/PLLGRQAQVAAG RILVVALFGGFGGLHSHLDGAAICLP CHGSRVEVTYETHQCGLVGLKLLRGGW EQSDRGGSGLTEDGQVGASSEDSSIISWP KHAVIVSLIRLEPGDE
5111	13162	A	5975	3	539	RRQAQITAGRVLVVALFGGCGGLHSRL DGAAICLPGHCHGSRVEVTYETHQCGLV GLKLLRGGREQSDRGGSGLT*DGQLGP SAEHPLITTTIPHLTVIVGLIPGLDPGDGQ GGRVPRAGAENRSGIPAGRSAS**MTNT GARPGFCWYHCTLLSPIFSPQVILAVFP GATDEGG
5112	13163	A	5976	1	351	RGGWEQSDRGGSGLTEDGQLGASSEH RTMQAVIPCCTVIISLIRLESTDGQGG*G ARLGARESVD*GPLIITIDEEFGGPSWD LLVPVYNINSDVGVASRTRDGDPLPGGP RR
5113	13164	B	5977	78	448	XQRTVISTGSSSTIGAGYDVHWHYQQLP GTAPKLLIYGNSNRPSGVPRFSGSKSGT SASLAITGLQAEDEADYYCQSYDSSLG YVWVFGGGTKLTVLGQPKAAPSVTLFPPS SEELQANKATL*

5114	13165	A	5978	1	393	RVLVVALFGGCGGLHSRLDGAACLPGH CHGSRVEVTYETHQCGLVGLKLLRGGR EQNDRGGSGLGLT*DGQLGPSAEHPSGTT TSSI*TAIHSGLSLEPINCQGGRGGLGSI EIYNKPLRADYRPHKS
5115	13166	A	5979	3	389	LPGGPGTMVAFGGGLPTVQGRVQALAP VLVGACLEGCGGLHSRLDGAACLPGH HGSRVEVTYETHQCGLVGLKLLRGGR QSDRGGSGLGLDGRSAWSLRRIHPDKDH WCLLIDSNSQPRLLPGRH
5116	13167	B	598	188	246	MAWLPGSCARVAFPAAGAAAR*
5117	13168	A	5980	1	908	AGHRGRRAFRGKQGQGRSRLGAGFSG WDKRWWVKGVSVAEIEGVTGVPARD NSIQAGGREVGYYALRRRGRNERAEGL VFSDQTSPIRASFTRRHPGRLCASPSGPLS HWVPGFPHPTLRTQGRPPIMCEIRKEERE QDFSLTMRIFIEKGWMTWDGGRDPSG NLQLQAPVGGVRVGGKAFGRGHCLLH GAPFMRDPAAVASVGLPLLGRQAQVAA GRILVVALFGGFGGLQSHLDRAAICLP CTGPRVKIHFKNHVLVGLKLLRGGW EQSDRGGSGLGLTEDGQLGASSEHSTQ
5118	13169	C	5981	60	392	
5119	13170	C	5982	176	385	
5120	13171	A	5983	1876	2540	FLQLGSWLGRGSCQVSRGPGQPRSDNLL VEPKDLKGNLTHFTTLGGFHLLYMMIWI HPPINLCSGSNFFFLFFFFSFLRLGLALL PQAGVEWRDLGLLQPLPRLQSCVPSS GSSWDRRFMPWPANFCM/FL*RWGLT VLPRLVSNWAQ/CDPPVSASQSAGITIV SHHVQLEGSTSFTFCKHICIFTPPFSPSLF ISHFYIDLLFYNKTLPLKKKKK
5121	13172	A	5984	1	393	
5122	13173	A	5985	1	1427	MRERFRNLDEEVEKYRAVYNKLRYEHT FLKSEFEHQKEEYARILDEGKIKYESEA RLEEDKEELRNQVLNVDLTKDSKRVEQL AREKVYLCQKLGLEAEVAELKAOKEN SEAQVENAQRIQVRQLAEMQATVRSLE AEKQSANLRAERLEK/DSLQSSSEQNTFL INKLHKAEREINTLSSKVKEKHSNKLEI TDIKLETARAKSELDRENRNKHSELDYIL HLDNEILKAAVEHHKVLLVKKDRELIRK VQAAKEEGYQKL VVLQDEKLELENRLA DLEKMKVEHDVWRQSEKDQYEEKLRAS QMAEEITRKELQSVRLKLQQQIVTIENAE KEKNNSDLKQQISSLQIQVTSLAQSEND LLNSNQMLKEMVERLKQECRNFRSQAE KAQLEAEKTLEEKQIQWLEEKHLHERI TDREKYNQAKEKLQRAAIAQKKRKS HENKLRLQEKVEVLEAKKEELETENQ VLK

5123	13174	A	5986	2	1831	NYKTLIIICALFTLVTVLLWNKCSSDKAI QFPRSSSGFRVDGFEKRAAASESNMYM NHVAKQQSEEAFFQEQQKAPPVVGGFN SNVGSKVLGLKYEEIDCLINDEHTIKGRR EGNEVFLPFTWVEKYFDVYGKVVQYDG YDRFEFSHSYSKVYAQRAPYHPDGVFM SFEGYNVEVRDRVKCISGVEGVPLSTQW GPQGYFYPIQIAQYGLSHYSKNLTEKPPH IEVYETAEDRDKNKPNDWTVPKGCFMA NVADKSRFTNVKQFIAPETSEGVSLQLG NTKDFIISFDLKFLTNGSVSVVLETTEKN QLFTIHYVSNAQLIAFKERDIYYGIGPRTS WSTVTRDLVTDLRKGVGLSNTKAVKPT KIMPKKVVRLLIAKGKGLDNITISTTAHM AAFFAASDWLVRNQDEKGGWPIMVTRK LGEGFKSLEPGWYSAMAQQAISTLVR AYLLTKDHIFLNSALRATAPYKFLSEQH GVKAVFMNKHWDWYEEYPTTPSSFVLNG FMYSLIGLYDLKETAGEKLGKEARSLYE RGMESLKAMLPLDYDTGSRTIYDLRHFM LGIAPNLARWDYHTTHINQLQLSTIDES PIFKEFVKRWKSYLKGSRAKH
5124	13175	A	5987	34	332	LLRQGLALLPRLECSGTISAYCNLCPLGS NHPPVSVSQVAGTTGVHHHAQLIFVFW VETGFCHVAQYGLEFLGSSNPALTSPSA GITGVSHCIWAQVF
5125	13176	A	5988	3	395	PAGGPAAGRAAARAGAMAKLLSCVLGP RLYKIYRERDSEAPASVPETPTAVTAPH SSS/WGYLSLSKVVPFESHYAGTLLLLLAG VACLRSIGRWTPNPQYRQFITILEATHRNQ SSENKRQLANYNFDFRSW
5126	13177	A	5989	3	414	
5127	13178	A	599	24	452	APSPDAMG/HSLWGKVNVEDAGGETLG RLLVVYPWTQRFFDSFGNLSSASAIMGN PKVKAHGKKVLTSLGDAIKHLDDLKGT AQLSELHCDKLHVDPENFKLLGNVLT LAIHFGKEFTPEVQASWQKMTGVASA LSSRYH
5128	13179	A	5990	3	784	LIALRTCTESPGTTHASADAWAEKLLSC VLCPRLYKIYRERDSEGAPISETETPTAD TAPHSSWDITYYQPRALEKHADSILALA SIFWPISYYSCTFAFFYLRYKGYLSLSKV VPFSHYAGTLLLLLAGVACLR/GIGR/WT NPQYRQFITILEATHREPSLQKTKRQLAN YNFDFRSWPVDHFWEEPSSRKESRGGPS RRGVALLRPEPLHRGTADTLNVRVKKLP CQITSYLVAHTLWRRMLYPGSVYLLQK ALMPVL
5129	13180	A	5991	461	660	
5130	13181	A	5992	1	1774	MSSSEVSWISWFCGLRGNEFFCEVDED YIQDKFNLTGLNEQVPHYRQALDMILDL EPGIGRWTPNPQYRQFITILEATHRNQSSE NKRQLVYYFFDFRSWPVDFHWEPPSSR KESRGGPSRRGVALLRPEPLHRGTADTL LNRVKKLPQITSYLVAHTLGRRMLYPG SVYLLQKALMPVLVQQAARLVEK/CNG/ RRAKL/LACDGNEIDTMFVDRRGTAEPQ GQKLVICCEGNAGFYEVGCVSTPLEAGY SVLGWNHPGFAGSTGVFPQNEANAMD VVDQFAIHRLEFFHPQDIIFYA/LAIGGFTAT WAAMSYPDVSAMILDASFDDLVPALAK VMPDSWRGLVTRTVRQHLNLNNAEQLC RYQGPVLLIRKTQDGNLTPTVPKDCSN RANCLLVKALQ\HRYPGVMAEEGLLVA RQWLEASSQLEEASIYSRWEVEEDWCLA SVLRASY/QAEHGADFPWSVGEDMSAD GARRQAGPLFPGLGKASCHNFGGPTHCT PLPSPQNFPRCPWHLPLGTQLGLIMEEWG ERRHEERPFLFVILLCFMFAVYKFCGKV

						GGPFLLTTVPLARFSPFMWLYLTFSNIH PALHEMG
5131	13182	A	5993	3	180	
5132	13183	A	5994	1	1015	MIAPLGLGVLARDQYRQAALADWDLKL DGGRQSTGAVSLKEIIGLEGVELGADGK TVSYTQFLLPTNAFGARRNTIDSTSSFSQ FRNLSHRSLSIGRASGTQGS�DTGSDLDG FMDYDPNLLDDPQWPCGKHKRVLIFPSY MLCTQLPCSQAFKCSTVHSSDSLHERN EHPCKKHNCLLQEGHSPLQAPGFRRALV VAPMQVFPLLMALGVTTVIDYVKPSDL KKDMNKFFKEKFPHIKLTLNKIRTLKRE MRKLAQEDCALEEPTVPMFVYFEKLA LKGLNKQNRKLCAGACVLVSSQYKFG SDLKKHEVKHLIDKLEEKFRLNRARTGF AF
5133	13184	A	5995	48	327	EELEALRR\QRLAELQAKHGDPGDAVAQ QEAKHREAEMRNSILAQVLDQSARARIV SEQGLIEILKKVSQTEKTTTVKFNRKRV MDSDEDDDY
5134	13185	A	5996	52	281	VSKLKHLLKPEKTKAVENYLIQMARYG QLSEKVSLSLEELYCYLLYQNMASKGQ LHLHWITEFLLTLRNCWRE
5135	13186	A	5997	1	280	GNPLFFLELHWNPSLRQACDRIYRVGQ QKIDVSIPRFVCGGTVEESILHFQEKIDL AKQFLSGSGESVTKLTLSDLRVLIGIYPP VDRVSE
5136	13187	A	5998	36	512	LFVLLQVNVSGNELCLMTSHLESTRGHA AERMNQLKMVLKMQEAPESATVIFAG DTNLRDREVTRCGGLPNNIVDVWEFLG KPKHCQYTWDQTTELLILGITAACKLR FDRIFRFAAAEEGHIIPRSLDLLGLEKLD CGRFPSDHWGLLCNLADIL
5137	13188	C	5999	205	519	MGKEGVHGGLINKKCYEMAFPLQAFPV LTSSVSPSPPLPTALHPFXXHTHTNHFIF WAITPYPLLLPKPHGLGARAGWTDTSY PYPSRVWLENFCFLGFFSE*
5138	13189	A	6	144	398	
5139	13190	A	60	713	811	IPGRPWRL*A*PVTLRQTQATCGG*MV RASL
5140	13191	A	600	3	496	HSLFGTSEVINKLRSPDAMGHFTEEDKG TITSLWGK\VNVEDAGGETLGRLLVVYP WTQRRFFDSFGNLSSASAIMGNPKVKAH G\KKVLTSLGDAIKHLG*SQGAPFAQA*S ELH\CDKAALLDPEELSSFLGEMLLGDPF LGNPIFGQKNFTPEGCKAFLGQKDG

5141	13192	A	6000	3	939	FLKLHLQSSVSGLASGGGREGWAGSGV RGLLHSESRGPDGSACPESASPRPASR GSSSPVRGRQQQRPRAPVAAPWPCWN AYIDNLMADGTCVTGAIVRYQDSEPPV WAAVPGKTFVNITPA*GGLSLVGKDR SSFLR*MGLTLWGGQK\CSVIRGLTCLQD GEF/SAMDLRYQEPGGAPTFCQSLFTKT \DKDG*VLADGAKEGVHGGLT\NKKCYE MASHLSGFPSTDHRLSLPLHRSPTAFAPL SSPYTHHPFLFFGPLPHTPYCCQNHMGL GGQGLMGQTPSPTHIPSRVWYGKLLFFG VFFFSE
5142	13193	A	6001	172	407	
5143	13194	A	6002	1	185	ESSCLSLPSSWDHRHGRPWLADFSVFF/C YRNSLTMLPRLGLNSWPQAILPPWPPKV LGLQA
5144	13195	A	6003	1	618	
5145	13196	A	6004	1	478	HPVRFFVHRGPH/VDFSLEVVSQWYELV VFTASMEIYGSAVADKLDNSRILKRRY YRQHCTLELGSYKDLVSVHSDLSSIVL DNSPGAYRSHPDNAIPKSWFSDPSDTA LLNLLPMLDALRFTADVRSVLSRNLHQ HRPLTGTGGTLGEPNQCL
5146	13197	A	6005	2	833	WNSAELGRGGPGAGGAGVIGMMRTQC LLGLRTFVAFAAKLWSFFIYLLRRQIRTV IQYQTVRYDILPLSPVSRNRLAQVKKIL VLDLDETLIHSDDGVLRPTVRPGTPDF ILKVVIDKHPVRFFVHKRPHVDFFLAEVW SQWYELVVFTASMEIYGSAVGRNLWD NSRSIL*GGRY\YRQPAPLELG\SYIKGPL CWFHSDLS\SIVL\DNSPGAYRSHPGYGG RDNAIPKSWVSVTPS\DTALLNLLPMLD ALRFTADVRSVLSRNLHQHRLW
5147	13198	A	6006	2	258	EAESRSVP\RELECSGPILAGCMLHLPSC HFPASASQVAGTTTHARHHTQLIF\AFLVE NGLC*PGWSRSPDLVIRLPWPPKVLGLQ A
5148	13199	A	6007	60	429	IRGQYMWGPVSSSLFCSMGYLVFGFFSFI FFFCDEVLLLSTRLECNGTISGHCNLCPL GSSHSPVSASRVAGTTGARNKARLIFYF FLVEMGFHHISQDGLDLL\NLVIRPPWPP KVLGLQA
5149	13200	A	6008	1	1047	SCGWTFTSMKLLRHRRKHDDRRFTC PVEGCGKSFTRAEHLKGHSITHLCTKPE CPVERCCARVSARSSLYHKKHVQDVG APKSRCPVSTCNRLFTSKHSMKAHMVR QHSRRQDLLQLEAPSSLT\PSSELSSPGQ RELTNMDLAALFSDTPANASGSAGGSDE ALNSGILTIDVTSVSSSLGGNLPANNSSL GPMEPLVLVAHSDIPPSL\DSPLVLGTAA TVLQQGSFSVDDVQTVSAGALGCLVAL PMKNLSDDPLALT\SNSNLAHITPTSSS TPRENASVPELLAPIKVEPDSPSRPGAVG QQEGSHGLPQSTLPSPAEQHGQAQDTLS AGTGNFYLV
5150	13201	A	6009	66	423	MEVACRQSTSWQPMDLASSSDFRPRMQ NPTTNRHSQANSCLQGDSGPRRMSASKR YFEKTNAICRPSSFTKHSRESSGSPGVSRS CTGTRF*NVTKQPYFTSSKHKRTGKVKV RISVV
5151	13202	A	601	24	452	APSPDAMG/HSLWGKVNVEDAGGETLG RLLVVYPWTQRFFDSFGNLSSASAIMGN PKVKAHGKKVLTSLGDAIKHLDLKGTF AQLSELHCDKLHVDPENFKLLGNVLVTV LAIHFGKEFTPEVQASWQKMTGVASA LSSRYH

5152	13203	A	6010	44	283	FSCLILHDAFPCILHDAFPCSLCSVTGSL VLSRVPLRGTHQKSAIATSTKIALSNM/KI LKHHTDAYFKKQQLFFDVSKK
5153	13204	C	6011	107	118	MAV*
5154	13205	A	6012	197	683	SLEVPLGFLLYLSFILLYSCFPLSNRVLLC HRDPFLSFLDLFLPAFSPDYVQFL*CA POFSIRH*TL*MLHCKCLDFFFFFFFETR FHSPSLRLECSGMISAYCSPTSQTQVRG TTGTCHHAWLVFIFSVETGFHHVAQPDL QLLPAPRPPKVLRLQV
5155	13206	A	6013	1	415	LWREGPKWN/AARLNESTTFVSVSRPTIA CGMVGTVRFYIKSPHLFKYAADPRDK HWAELQHHMRATGGKMAAYLLIEEDIP GPCGPMITEDALDLKLEGIEIPLSLPSW MVEKMRKYMETLRTENEHRAVEAPQ T
5156	13207	A	6014	1	1256	
5157	13208	A	6015	2	1594	GRPARGAPQRGQTPEAGADKRATAGLC GGGGGRRRRHRASRRRAGRGEPAGLKS QGQRAVPKRAVARGGROVYSAIALLEP AGSEIADDLSILYSNRAACYLKEGNCSCG CIQDCNRALELHPFSMKPLRRAMAYET LEQYGKAYVDYKTVLQIDCGLQLANDS VNRLSRILMELDGNWREKLSLIPAVPAS VPLQAWHPAKEMISKQAGDSSSHRQQGI TDEKTFKALKEEGNQCNDKNYKDALS KYSECLKINNKECAIYTNRALCYLKLCQ FEEAKQDCDQALQLADGNVKAIFYRRAL AHKGLKNYQKSLIDLNKVILLDPSIIEAK MELEEVTLLNLKDKTAPFNKEKERRKI EIQEVNEGKEEPPRPAgevSTGCLASEK GGKSSR\SPEDPEKLPKPNNAYEFQII NALSTRKDKEACAHLLAITAPKDLPMFL SNKLEGDTFLLLIQSLKNNLIEKDPSLVY QHLLYLSKAERFKMMLTLISKGQKELIE QLFEDLSDTPNNHFTLEDIQALKROYEL
5158	13209	A	6016	1	449	MAEGEITTFALTTEKFNLPNGYKKPKLL YCSNGGHFLRILPDGTVDGTRDRSDQH QLQLSAESVGEVYIKSTETGQYLAMDT DGLLYGSQTPNEECLFLERLEENHYNTY ISKKHAENWVGLK\GPRTHYGQKAIL FLPLPVSSD
5159	13210	A	6017	1	153	
5160	13211	A	6018	1	528	
5161	13212	A	6019	223	513	QRGPLPEDPSGWHSGWDKGQERPAHRH QMRNVCSWKGWRRTTTTPIYPRSMQRRJ GLLASRRMGAAANAVLGLTMARKQSC*A MAEGEITTFALTTEKFNLPNGYKKPKLL YCSNGGHFLRILPDGTVDGTRDRSDQH QTPNEECLFLERLEENHYNTYISKKHAE KNWFVGLKKNNGSCKRGPRTHYGQKAIL FLPLPVSYNSRDLFWEG
5162	13213	A	602	38	538	APSPDAMGHFTEEDKATITSLWGKVN EDAGGETLGRLLVVPWTQRFDSFGN LSSASAIMGNPKVKAHGKVLTSLGDA IKHLDDLKGTFAQADVNTCDKLHVD PENFKLLGNVLTVLGNPIFGKEFTPEG CKASWAERWVTWSWPVPCSSRIPLKPL CP
5163	13214	A	6020	1	812	MAEGEITTFALTTEKFNLPNGYKKPKLL YCSNGGHFLRILPDGTVDGTRDRSDQHS GLNYSWTMHQRLQALRTNDHFAGAH VPSDAQVMGMDAGVYTSSKTIAAFVIVL LYHSQVHLSVSLIMQKPQVQGPWLALS QQLQEDVGLENWNEVTLESWTPSQLHK PLSLVQLQLSAESVGEVYIKSTETGQYL AMDTDGLLYGSQTPNEECLFLGGLEE NHYNTYISKKHAENWVGLKKNNGSC

						KRGPRTHYGQKAILFLPLPVSSD
5164	13215	A	6021	1	1471	MESMFSSPAEALQRETGVPGLLTPLPD LDGVYELERVAGFVRDLGCERVALQFP DQLLGDAVAVAAARLEETTGSKMFLGDT AYGSCCVDLVGAEQAGAQAALIHFGPAC LSPPARPLPVAFVLSSTFCGLGTLCDLW GPKPRQSACGAAIGEPACAHLEALAT LLRPRYDLLVSSPAFPQPVGSLSPMP LERFGRRFPLAPGRRLEEGAFYVGGSK ASPDPLDPLSRLLGWAPGQPFSSCCP DTGKTQDEGARAGGLRARRRYLVERAR DARVVGLLAGTLGVAQHREALAHLRNL TQAAGKRSYVLALGRPTPAKLANFEVD VFVLLACPLGALAPQLSGRLFQPIAPCE LEAACNPAWPPGLAPHLTHYADLLPGS PFHVALPPPESELWETPDVSLITGDLRPPP AWKSSNDHGSLALTPRQLELAESSPAA SFLSSRSWQGLEPRLGQTPVTEAVSGRR GIAIAYEDEGSG
5165	13216	A	6022	1	343	PTRPPTPRTHGQECPLDVPDFFLFRTR AGDPLRRVSSSFNKNLIFFSIKQPPPC AFHPRDPPGSKRPLFWDPFKGPILAPI LSLTQIFFRWSCFFPKSRIAQGWALS
5166	13217	A	6023	3	919	
5167	13218	A	6024	3	275	GLRLGKIGRDCLIGYGASMLLERLMIS SDAFEVDVCGQCGLLGYSGWCHYCKSS CHVSSLPVPIYACKLLFQELQSMNIIPRLK LSKYNE
5168	13219	A	6025	455	679	
5169	13220	A	6026	1	2064	MTASIRRYHTCATDGEPDSSVLVGGDGD LTLLVAALGLDLGLPFMLLPIMEWMR VAITYAEHRRSLTVDSGDIRQAARLLP/ GPEHCFSSFRRLDARAATEKFNQDLGFR MLNCGRTDLINQAEALGPDGVNTMDD QGMTPLMYACAAGDEAMVQMLIDAGA NLDIQVPSNSPRHPSIHPDSRHWTSLTFA VLHGHISVVQLLDAGAHVEGSAVNGG EDSYAETPLQLASAAGNYELVSLLSRG ADPLLSMLEAHGMGSSLHEDMNCFSHS AAHGHIRGIWGLVTLGPLACLEEDHETP SPRVQSSPSGQEGTGGQLRNVLRKLLT QPQQAADVLSLEEILAEGVESDASSQ GSGSEGPVRLSRTRTKALQEAMYSAEH GYVDITMELRALGVPWKLHIWIESLRTS FSQSRYSVVQSLLRDFSSIREEEYNEELV TEGLQLMFDILKTSKNDSVIQLATIFTH CYGSSPIPSIPIRKTLPARLDPHFLNNKE MSDVTFLEVGKLFYAHKVLLVTASNRF KTLMTNKSEQDGDSSKTIEISDMKYHIFQ MMMQYLYYGGTESMEIPTTDILELLSAA SLFQLDALQRHCEILCSQTLMESAVNT YKYAKIHNAPELALFCEGFFLKHKMKALL EQMPSGSSSTAAAAKCRAWIHCRTCRT PWQSACTLSTSPPGSAA
5170	13221	A	6027	2	144	LFYEMESCIAQAGVQWLSLGLLQAPPP GSCHSPASASCELMFFKI
5171	13222	A	6028	163	465	
5172	13223	A	6029	1	1614	
5173	13224	C	603	83	349	
5174	13225	A	6030	163	1917	

5175	13226	A	6031	133	424	PFLCDLFHLVIFISDSLFLMVIDFVNGTFM ISFINRILLGQNRDGIWFSTDDYFHHQDG YRYNVNQLGDAHDWNQNRGLFWAKCP RIEYLARSQKT
5176	13227	A	6032	3	270	FKMESGSVAKLECRGTISAHCNLRPPGS SDPPASASQIAATTGVHHHNRLIPAFLE TGfCHVDQAGLELLT/LVIHPPRPPKVLG LQA
5177	13228	A	6033	407	720	RHNSSNFFFFFFFETESRSIAQACMQWC YLSSLQSLPPGFKRFSCLSLPSSWDDRC PPCLANFVFLVETGFCHVGQAGLELLIS GDPPASASQSTGITGMI
5178	13229	A	6034	1	135	KEAPGLKKENNCVFCAICQINMEGKTL SKKDRPICKSHAFFHV
5179	13230	C	6035	96	410	
5180	13231	C	6036	108	422	
5181	13232	A	6037	2	195	CLPRFMPILPASTSQVAGNTGAHHHARLI FVFLVEVGFHHVGQAGLL/ISLPQMIHPP RPPKVLGL
5182	13233	A	6038	251	377	LGLAQTLTDNPLLGGEGLECAPTGPLEPP LAYTVNLILKSKARRTEPQKQYFSSHAK NGG*REGVAA*APTGPLEPLAYTVNLIL KSKA
5183	13234	A	6039	175	393	ARPTFRLYLSLPVSQAGQQREAER/HPRL VPTGPTHREPSVRYDNLRSRIVDLSVAP RGEESRRCQGLVVHL
5184	13235	A	604	295	448	NQTCVCWHACAYVSSNRVPWSIGSAIRS VCCYPLFPALCAPCL*ISTALD
5185	13236	A	6040	1	537	
5186	13237	A	6041	1	1555	MPYSLNLAIRDTFVNASRTLYSSSPRVLS NNSDANLELINTWVAKNTNNKISRLDS LPsDTRLVLLNAIYLSAKWKTFDPKKT RMEPFHFKNSVIKVPMMNSKKYPVAHFI DQTLKAKLSRGDSLKEPTSIAESSRHPSY RSEPSLEPESFRSPTFGKSFHFDPLSSGSR SSSLKSAQGTGFELGQLQSIRSEGTTS YKSLANQTRNGSLSYDSLLTPSDSPDFES VQAGPEPDPLGYTSPFLSARLAQQREA ERHPRLVPTGPTHREPSVRYDNLRSRIV ASLQEREKLLRQSPPLPGREEEPGLGDSG IQSTPGSGHAPRTSSSSDDSKRSPLGKTP LGRPAVPRFGKPDGLRGRGVGFPEPGPT APYLGRSMSYSSQIAQPGVSETEVDLRP LLTPKDEVQLKTTYSKSNGQPKSLGSAS PGPGQPPLSSPTRGGVKKVSGVGGTTYEI SEFDHHCWPVNNCIGRRNYRYFFLLS LTAHIMGVFGFGLLYVLYHIEELSGVRT AV
5187	13238	A	6042	1	627	TRREAERHPRLVPTGPTHREPSVRYDNL LSRHIVASLQEREKLLRQSPPLPGREEEP GLGDSGIQSTPGSGHAPRTSSSSDDSKRS PLGKTPLGRPAVPRFGKPDGLRGRGVG SPEPGPTAPYLGRSMSYSSQKAQPGVSE TEEVALQPLLTPKDEVQLKTTYSKSNGQ PKSLGSASPGGPPLSSPTRGGVKKVSG VGGTTYEISV

5188	13239	A	6043	3	2265	PTWLERGGGEPAARPQTPOPTAPESRGP SGASALRCRGPTARSLPAASMLGAPDES SVRVAVRIRPQLAKEKIEGCHICTSVTPG EPQVFLGKDKAFTFDYVFDIDSQQEQIYI QCIEKLEGC FEGYNATVFAYGQTGAGK TYTMGTGFDVNIVEEELGIISRAVKHLF KVSIEKKHIAIKNGLPAPDFKVNAQFLEL YNEEVLDLFDTRDIDAKSKKSNIRIHED STGGNLYCGRLPTRTVNTESEMMQCLK LGALSRTTASTQMNVSQSSRSHAFTIHVC QTRVCPQIDADNATDNKIISESAQMNEFE TLTAKFHFVDLAGSERLKRTGATGERAK EGISINCGLLALGNVISALGDKSKRATHV PYRDSKLTRLLQDSLGGNSQTIMIACVSP SDRDFMETLNLKYANRARNIKNKVMV NQAELVSKSMHFVVKSHDFRWSSWST KPGKRIIDEEGVESINDMFHENAMLQTE NNNLRVRIKAMQETVDALRSRITQLVSD QANHVLARAGEGNEEISNMIHSYIKEIED LRAKLESEAVNENLRK\NLTRATARAP YFSGSSTFSPTILSSDKETIEIDLAKKIDLE KLKRKEKRKKKSVAGKEDNTDQDEKK EEKGVSERENNELEVEESQEVSDHEDEE EEEEEEEDDIDGESSDESSESEDEKANY QADLANITCEIAIKRKLIDELNSQKRLQ TLKKQYEEKLMMLQHKIRDQTLERDQV LQNLCSVESYSEEKKK
5189	13240	A	6044	2	323	EDQGLYSIRMEGARGCLAKSLAL*GAGR GFYSGERTWTLSPSGNCAPYQRGGW WSHA*AHSNLNGVWHHGGHYRSRYQD GVYWAEFRGGAYSLRKAAMLIRPLKL
5190	13241	A	6045	3	902	PFFCSTISYRLCPEGAAGQKKVLPPPPLV PVVPVRLVGSTRDTSRMRDPAPEPQRDQ TORQQEPMASPMAGHPADPTKPVGPW QDCAEARQAGHEQSGVYELVRGRHVVS VWCEQQLEGGGWTVIQRQDGSVNVFT VSWQHYKAGFRPDGEYWLGLEPEHHL TSRGDHELLVLKEDWGGVRGARAHYDG FSLEPESDHYRLRLGQYHGDAGDSLW HNDKPFSTVDRDRDSYSGNCALYQRRG WWYHA\CAHSNLNGVWHHGGHYRSRY QDGVYWAEFRGGAYSLRKAAMLWPLK L
5191	13242	A	6046	3	218	KAVSLSVTQAGVQWLISLQSPPPRFNRF SCLSLPSSWDYRQVPPRANFCIFSRDRV SPCWPGWSPTPNLK
5192	13243	A	6047	1	297	MVVSLYFPTHFDSFPVLLCLVLCPGRLIL RDCNPRLPFV\IDF\CLGLVNGMPWHSF GGKKREDNVFLHCSHSDLG YVLLAGTA SLQDFSFFQKSPPP
5193	13244	A	6048	1	8157	
5194	13245	A	6049	1126	1355	
5195	13246	A	605	43	208	ARTLIEVIGLSHHNQKAHAMLLNAF*SSI RASP*RSKY*SSLWNQTSRFQIPAPT

5196	13247	A	6050	1	1627	MGSRCNLNPPPPAHSDDTTGKDSFGNIRGA ETGQGASACSVTSARVTCGAGSEPHSHR NPGISAQVGLAPSYGAARGRRRPLALQQ SPQERRHVGNSTRGLLPASLPGTASSQ SASATASAAALPLKVTGPLARNPTTPWTA AAALATRGQRPEKGLFPGPAPFSLGKRK RGRGRTWERRRRVSJETSTCFRPGCERL GAAAGANLSQLASSQRPLRERWVLYTII MAAAGAPDGMEEPGMDTEAETVATEAP ARPVNACLEAEATAGAGAGTVAEDSGTA RGSLOPA\ PAPAQAPGDPVSQASVSNGE DSGGSADSELVDLRIIWNKTKHDVKFPL DSTGSELKQKHSITGLPPAMQKVMYKG LVPEDKTLREIKVTSKAKIMVVGSTINDV LAVNTPKDAQQDAKAENKKEPLCRQ KQHRKVLDKGGPEDVMPVSKGAQERLP TVPLSGMYNKS GGK VRLTFKLEQDQLW IGTKERTEKLPMSIK\NVVSDP\NEGHED YHNDGRFQLAPTEA\SYWVYVWPTQY VDAIK\DTVLGKWQYF
5197	13248	C	6051	47	298	
5198	13249	B	6052	64	362	XCVWHRRKVAVNLAKLKLFRHYVVMV ICYVYFTRIIAILLQVAVPFQWQWLYQPT GNNPYLQLPQEDEEDVQMEQVMTDSGF REGLSKVNKTASGRELL*
5199	13250	A	6053	1	342	
5200	13251	A	6054	1	485	
5201	13252	A	6055	696	3195	SGRRTPMASCRQRRCPFSSSTWSCPPAS WPLASSGCPSSAGTRTASFkihWlMAAL AFTKSISLLFHSVRALDRGAAGAPITSFES HPPSSLFNFLTTHLMVTVRVPNPPPPPSA SHPSVRLTVRLSIHPQINYYFINSQGHPIE GLAVMYIIAHLK GALLFITIALIGSGWA FIKYVLS DKEKKVFGIVIPMQVLANVAYI IIESREEGASDYVLWKEILFLVDLICCGAI LFPVVWSIRHLHGCVWHRRRMVAVNLA KLELFRHYVVMVGARLTHSGFGGITGL LHAHPSPSAAAPSRGPHGSPARILQSSP MPARAPTVLAPRLLAPLQVICYVYFTRII AILLQVAVPFQWQWLYQLLVEGSTLAFF VLTGYKFQPTGNNPYLQLPQEDEEDVQ MEQVEAHTLKLKLVKDIKSTVSNVFSEMK ENMDKELKQIMRMIFERRICVADPFVET VMQDFFIDLRLPYSVVRNEQVEIRAVLY NYRQNQELKVRVELLHNP AFC SLATTKR RHQQTVTIPPKSSLSVPYVIVPLRPACRK WKSRLSTIISSTVSGKG VQKEDIPPAD LSDQVPDTESETRILLQGTPVAQMTEA VDAERLKHIVTPSGCGEQNMIGMTPTV IAVHYLDETEQWEKFGLEKRQGALELIK KGYTQQLAFRQPSSAFAAFVKRAPSTWL TAYVVKVFS LAVNLIIDSQVLCGAVKW LILEKQKPDGVFQEDAPVIHQEMIGGLR NNNEKDMALTAFLISLQEAKDICEEQV NIHNRYAATRQLMVAKISGKFSKMDKS KTAGLADCHSVLDVSNKGVLRDVASTS SGIVDWRGSQIQT
5202	13253	A	6056	1	516	LRQPTRPVFGIVIPMQVLANVAYIIIESRE EGASDYVLWKEILFLVDLICCGAILFPLV WSIRHLKDASGTDGKVPVNLPLK LFRH YYVIPAPTPCAPLQVICYVYFTRIIANPL QVAVPFQWQWLYQLLVEGSTLAFFVLT GYKFQPTGNNPYLAVAPGGRGGCSRWS K

5203	13254	A	6057	3	528	LSCRVQVSAPP RPRPALPVSAVPGTGT LTPALLHP/WLADCDVSDSSCSSLAATLL ANHSLRELDLSNNCLGDAGILQLVESVR QPGCLLEQLVYVQRAGRVPRLPREE GGGGGGHWAHASLLACVQPVQFTGLR RWRTGLQGP GERTSTSLRGHLLRLFLLL AAALDDRP
5204	13255	A	6058	1	334	
5205	13256	A	6059	225	843	WTRCWSRLRASGSSCEGRRAAPPRPCA RYEGGYQRSCGSESACGRRVLGSSLRQ HQGSCRNTRAGMFCGRQYIPHPASAASPR RPLGRSRNTQMGTPLSRVLLRSCRKID/ SLKQKVTHLRGLQIPHEPELMRKEISRLN KTVGRENK*LSRSEAGAGGLQEARDAA LERVQMLEQQVSVPRAPDGTQMSAGR WWPKSWDRLG
5206	13257	C	606	892	1269	
5207	13258	A	6060	300	957	GSTKVHAETHALGCSVADSTSRTHQQL HRGAHWGEVGTWRWHTSVQSVIEKLQ EENRLLKQKVTHVEDLNKQWRYNASR DEYVRGLHAQLRGLQIPHEPELMRKEIS RLNRQLEEKINDCAEVKQELAASRTARD AALERVQMLEQQILAYKDDFMSEADR ERAQSRIQEELEEKVASLLHQVSWRQDSR EPDAGRIHAGSKTAKYLAADALELMVP G
5208	13259	A	6061	2	271	FFETESRSVARLECSGAISAYCTLCLPGS SDSIASASRVAGITGEHHHARLILVFLVE MGFHHVGQAGLGLLDLVIHPPRPKVLG LQA
5209	13260	A	6062	3	376	DYSLGLPVVTTGCWGHMSNAPLRWALN PSYWGKNQLLCPESLALCCGLCCKPRFL EVTSVRSADLYLSSPCLVRRCPFRGKE KPAVGMRMPDNKGWRRALSSSLSPRVP APVAASVLTCVMN
5210	13261	A	6063	2	70	
5211	13262	A	6064	3	258	ADPPSPSFCFCFFFETESCSVTNRLECSG AILAHCNLC/LPTCHHAWVIFVFLVETEF HHVGEDGLNLL/NFMYLPRPPKVGLQ A
5212	13263	A	6065	1	408	
5213	13264	A	6066	3	25	
5214	13265	A	6067	3	503	
5215	13266	A	6068	1	1740	MAAVVAATRWWQLLLVLSAAGMGASG APQPPNILLLLMDDMGWDLGVYGEPS RETPNLD RMAAEGLLFPNFYSANPLCSP SRAALLTGRLP RNFYTTNAHARNAYT PQEI VGGIPDSEQLLPELLKKAGYVSKIV GKWHLGHRPQFHPLKHGFDEWFGSPNC HFGPYDNKARPNI PVYRDWEMVGRYYE EFPINLKTGEANLTQIYLQEALDFIKRQA RHHPFFLYWAVDATHAPVYASKPFLGTS QRGRYGDVREIDDSIGKILELLQDLHV ADNTFVFFTS DNGAALISAPEQGGSGNPF LCGKQTTFEGGMREPALAWWPGHVT GQVSHQLGSIMDLFTTSLALAGLTPPSDR AIDGLNLLPTLLQGR LMDRPIFYRGDTL MAATLAGQHKAHFWTWTNSWENFRQG IDFCPGQNVSGVTTHNLEDHTKLPLIFHL GWDPERFPLSFASAEYQEALSRITSVV QQHQEALVPAQPQLNVCNWAVMNWAP PGCEKLGKCLATPPESIPKKCLWVPLAPA QTQARPRISWPCKCLEEGWLWRSSPN PAPSQTDSTCRRRGTC TISNLPR T
5216	13267	A	6069	3	2945	
5217	13268	A	607	187	363	MPLRLPIQDVY*IGGIGTALVGRVESGAV NYGLVGSSVH*AVQSV ALDFRNSWML YSQ

5218	13269	A	6070	2	3078	
5219	13270	A	6071	3	3204	AGRGRLWGGTASREPQKSAGKFPRWGA FRASRTALGPGARSQERGPGGGNAPRPP PPRLPPAAVLAAAVAAAAALPRRGAAL KGGTPPPGALAARAPREPVAAMPPRAPP APGPRPPRAAAATDTAAGAGGAGGAG GAGGPGFRPLAPRPWRWLLLLALPAACS APPPRPVYTNHWAVQVLGGPAEADRV AAHGYNLNGQIGNLEDYYHYHFKTK RSTLSSRGPHFTFLRMDPQVKWLQQQEV KRRVKRQV
5220	13271	A	6072	3	3002	
5221	13272	A	6073	1	1181	MEVSRAGLSTVLEAVLCPADLTAASLDA ASPMPSSSHLPVLGYPVGKSGARPGSTQ EVVLTAAAVTQEVVLTAAAVTQEVVLT AAAVTQEVVLTAAAVTQEVVLTAAAVT QEVVLTAAAVTQEVVLTAAAVTQEVVLT TAAAVTQEVVLTAAAVTQEVVLT ENKPVSAHSSSTCARTGSPGRPLHTQSP PRGHILFGKEKVCYKFKHDILKHLTQLT VDGIVSIPLVQVLRRTALTSAEHSQDQR VVYLEHVVRTSISHPRRGDLQIYLVSPS GTSQLLAKRLDLSNEGFTNWEFMTV HCWGEKAEGQWTLEIQDLPSQVRNPEK QG/DVFCTKCHSHQSFEESQDTKSVAW EGWGCTHGVHCEVPKNLGIRSGKHHPL KIKLV
5222	13273	A	6074	3	656	RSAFELWTQEGGLPSPSGW/VIIQSLKNL NRTDSRGRSSPLISCLATGAGTSRHLLP LDWMSTIGCPGSQASPELSNHTSGFP GFP AFHPRWWAFSGPQSHNQIPHPKSPL CVGSLLQRAYTNTLPLFPLQFLRSPTKES TYSQLHPSGSPGGGPGPRQLGLTSPKAS EQPLPGFDWEGQGSDDRAGADGSGRES SGTPGTAVLQRSSCGTSC
5223	13274	A	6075	3	873	AAEGLPPVRIPPFSETTANGTISFTIEMVQ DMGAGLAVVPLMGLLESIAVAKAFASH NNYRIDANQELLAIGLTNMLGSLVSSYP VTGSFGRTAVNAQSGVCTPAGGLVTGV LVLLSLDYLTSLFYYIPKSALGAVIIMG RGPVSTPRSFERNALGFLKRLDLLPLCVT FLLCFWEEQDGLAGALGSLMLLHSA RPETKGSEGPVLVLQPASGLSFPAMEAL REEILSRLEVSPPRCLVLECTHVCSIDYT VVLGLGELLQDFQKQGVAFEGQLQVP RLRVLLSR
5224	13275	A	6076	3	256	HASGMKNDLVYTGVDPETLPNRNGDGV /PTGLSPDPQFRTRKIQASLLTLEETMKQ LEEEEEFRRLKPLLANLGGNSVPHPGCT

5225	13276	A	6077	1	1966	MAEPLLRKTF SRLRGREKLPRKKS DAKE RGHPAQRPEPSPPEPEPQAPEGSQAGAEG PSSPEASRSPARGAYLQSLEPSSRRWVLG GAKPAEDTSLGPGVPGTGEPAGEIWYNP IPEEDPRPPAPEPPGPQPGSAESEGLAPQG AAPASPT/NSLPHQVPGPRQAPLHKDEE AAGTAAPPEPARPPGWQGAREGCPCGL RHQPLPPGQQRGGPRAGSRAWGHPEPE GRLPQRRGLTGAPSWAPITHLLPALRGG SRSPGTPGRTLGPQPAPVRSRGAAASA GGHPQGPLLPTASGWGGQGNRATARG AGLPAAGPHLPPGAGGRQAPARPGACV GPWREKAPALCPGHRAAAHGLPRICQA QQLAVRLEPQGLLYAKLTLSEQQEAPAT AEPRVFGPLPLLLVERERPPGQVPLIIQKC VGQIERRGLRVVGLYRLCGSAAVKKELR DAFERDSAACVCLSEDLYPDINVITAVPSL ALEASGALTRGDPVFTGILKDYLRLEPTP LITQPLYKVVLEAMARDPPNRVPPTTEG TRGLLSCLPDVERATLTLLLDHLRLVSSF HAYNRMTQNLAVCFGPVLLPARQAPT RPRARSSGPGLASAVDFKHIEVLHYLL QSWPVPACPDNLQMSRLTCDPNDSHLCT CRWQTPKW
5226	13277	A	6078	2	82	
5227	13278	A	6079	1	347	FFFFFFFFLETASHVAQAGGQGHDLSSL QPPPPRFKQFSLSLPSSWDHRHKPPHPA NFVFLVETGFHHVQGAGLELLTSSDPPA SASQMAGITGVSHCAWPITIFKQSNYGM L
5228	13279	A	608	514	792	DSRCPGAMACALRAPPRITNPVSAQWDP ETGVSAGEPWWTQRRNQSALQRGNV PFCRCRDHEFTLDLGGQGGQIT*GQEFET SLANMAKPH
5229	13280	A	6080	1	779	
5230	13281	A	6081	1	214	HPTAAIVPPGPEAGLIYTPYEYPYTLAPA TSILEYPIEPSGVLVWLSQRKAKNSRTV LTPSSDLNLTNA
5231	13282	A	6082	3	435	EPFPGGDCIPRATLESCRSMLMDTVGS GKLNLEQFHHLWKNKIGWQKIFKHYD TDQSGHHQTATKMRNAV/NTDAGFHLN NQLYDIITMRYADKHMNIDFDSFICCFV RLEGMFRAFHAFAFDKDGDIKLNLEWL QLTMYA
5232	13283	A	6083	2	339	GKPTLREFTHL/WDKIKGWREIFNNITPS QSGTITGYEMRNA/VNDAGFHLNPLYD IITSRTADNHMNIDFESFICCFVRLEGM FRAFHAFAFDKDGDIKLNLEWLQLTM YA
5233	13284	A	6084	2	775	PSASDQSTWYLDESTLTDNIKKTLHKFC GPSPVVFSDVNSMYLSSTEPPAAA EWAC LLRPLRGREPEGVWNLLSIVREMFKRRD SNAAPLLEILTDQCLTYEQITGWWYSVR TSASHSSASGHTGRSNGQSEVA AHACAS MCDEMVTWRLAVLDPALSPQRRRELCL TQLRQWQLKVIENVKRGQHKKTLERLFP GFRPAVEACYFNWEEAYPLPGVTYSGT DRKLALCWARALPSRPGASRSGGLEESR DRPRP
5234	13285	A	6085	193	388	
5235	13286	A	6086	2	353	AAAEDLS DALCEVDAVLADFASPFHER HFHYEEHLERMKRRSSASVSDSSGFSDS ESVADSLAYRNSFSFSDKLNSTDPAL LSATVTPQKAKLGD TKELEAFIADLDKT LASM
5236	13287	A	6087	315	411	
5237	13288	A	6088	2	283	
5238	13289	A	6089	3	189	

5239	13290	A	609	1169	1335	NFASDDKFSLP*DYTTFKVNWPGAVAH A*NPSNLGGQGGQIT*GQEFETSLANMA
5240	13291	A	6090	1931	3137	KMEISSLKEINMEPNHSETMFKKAKTK AKKKPRKRSDDSGGYNLSDIIPSSTGL LKSGKTNSVESLPELLTSDSEGSYAGVGS PRDLQSPDFTTFHSDKIEAKVKPYVNG TSPVYSREDLKPWEKSPILKISAPQIPSN RIDTTSSASWVAGSFSPVSPVVDLRTIM EIEESRQKCGATPKSHLGKTVSHGVKLS QKQRKMIALTTKDNNISGLNSMQTVICIP SDAP*TVNE*GSSLHSVSSKSFRDFFLEE KKSVTSHSSGDHVKKVSFKGIENSQAPKI VRCSTHGTGPEGNHISDLPLLDSPNPWL SSSVTTPSMVAPVTFASIVGRGTSTKEAA LIRSREKPLAL\QIEEHAIQDLLVFYEAFG NPEEFVIVERTPQGPLAVPMWNKHGC
5241	13292	A	6091	336	410	
5242	13293	A	6092	40	921	TEVPGVHSENDKNQKKKIRKLDPKKKQ VDTVQIIQGSKKGSSFLIFFSPLIILVEL QVGNVVAQELSIQLELFWRTASQSVTE PTAGLCLLNPEGEMRALRGRRKPLLI PSKQDLEWTSSKLQQTCS*GF*R*KEN* QTERSTPKPHLVGSSGQGNQAGEGNK GYPVKRGRSQIVPVC*HDCISRKPHCLN PK/YSL**ATAKSQDTK/FNVQKSQAF LYTNNKQTD SQIMSELPFTIASKRIK YLS NPTYKGCEGPLQGLQTI AQRNKTEPNK WKNIPVMGEEP
5243	13294	A	6093	1	1960	MPPHSEPHSPSTRQKRKVPLFVRQCPSF VIQAPKAKMDTFDGRKKQFTRFLFLFSM DQLGQGRFSMQTSLFALAVYRKDSPLV ACQVQALGNLEPSSVEAHVSSHGIAIDR KGWHVSLFSIQPGDCFPKALVEDSPDR ARRQSSKEEGWCDRRRLKFHSSKGA AAIVVKSKEYESPSFGVCFESLLNPPRLT SRREKTISSSKRCRQCHAEETT VVFWAK ESQTGEQTGRGAGQRRMGMIICKACSM LPAERQDLRPTSLVISHGVSVKDRREHC QCPNYYPPLRNMSPLEHSIKICGGKKPQ NDSQRITTITK VIVNQDFKQPDDELTSQG SRKETSEASLVTLWELVTAGQTPPLVTP RQTGSGVDLQQTPTDLQLRVL TIRKTN KQKGHPKPHLYVTIHKDQRTLHPKSTEY TFFSAPHPTYSKIDHIVGSKALLSKCKRT EITNCLSDHSAIKLELRIKKLTQNRSTTW KLNNLLNDYVVKEMKAEIKMFFETN ENKDTTYQNLWDTFKAMYSGKFMALN AHKRKQQRSKIDTLISQLTELEKQEQTHS KASRRQETTKIRAELEIETQKTLQKINE SRSWFFEKINKIDRTLARLIK KREKNQI DTIKKIKVISPPIPQKYKLLFILFGTGTQIN
5244	13295	A	6094	275	1839	CPSVGFSLQAGVVFGCKLLTAKDF*QQT QGFSQ/RLSQLHTHGHRALQKKAISSKNE FTIMGQISEATSALFGEKESKEATLRGEG ARNRDDRVD SNCRLQPPGQDGEQKV PVKYSAGDTQANRVWSGLQQTPTDLQL RVLTVRRKTNKQKGHPHQNPICTSASSK TKEIQTIREYHKNL YANKLENLEEMDK FLDTYTLPRLNQEEVESLNR PITGSKIEAI NSLP TKKSPGDAFTA EFYQRYKEELRIK YLG IQLTRDVKDLFKENYKPLLNEIKGH KQMEEHSM LMDRKNQYCENGHTAQEL EKTALKFIWNQKRAHIAKTILSQKNKAG GIILPDFKLYYKATVTKTAWYRYQNRDI DQWNRTEPPEIIPHIYNHLIFDKPKNEK WGKDPLFNK WYWENWLAJCRKLKLSF LTPYTKINSR WIKDLNGRPKTIKLEENL GNTIQDIGMGKDFMTKTPKAMATKAKV GKWDLIKLSFCTAKETTIRVNRQTEW

						EKIFAIYPSDKGLISRI
5245	13296	A	6095	78	1986	EKTKSASDWCT*K*RG\DGTKLENTLQDI IQDNFPNLGRQANIQIQEIQIMPQRYSSRR ATPRHIIVRFTKVKMKEKILRAAREKEIQ TTISEYYKHL YANKLENLEEMGKLLDTY TLPRQNQEEVESLNRPIAGSEIEAIINSLPT KKSPGPDGFTAQFYQRHKEELVPFLLKQ FQSMEKEVILPNSFYEAIIIPKPRD TT EKENFTPISLMIIDAKILNKILANRIQQHIK KLIHQDQVGFISGMQGW FNEHKS VNVH HINRTKDRNHMIIISVDAEKAFNKIQQPF MLKTLNKLGIQLTRDVKDPFKENYKPLL NEIKEDTNK WKNIPY SWIGRINIVEIAILP KVSLE RERQHDQTHVQSLEKLDLLEQE YNKLT TMQALAEKKMQELEAKLHEEEQ ERKRMQAKAAEHPRCLYLAIFSA LKN LQDKIRRLERIQAEESVKTL SRETIEYK KVLDEQIQERENSKNEESKH NQELTSQ LAAENKCNLLEKQLEYMRNMIKHAEME RTSVLEKQTPLLIPRQGRSVDLQQTP TD LQLRVLT VRRKTNKQKGHPHQNPICMSP SSKTKEERSSSPTTERS WTENDFDELREE GFRRSNYSELKEELQTHGKEVK NLEKKI RRMAN
5246	13297	A	6096	870	1860	TRKSRRNG*IPGHIHPKTKIQEEAESLNR PITGSEIEAIINSLPTKKSPGTDGFTAQFY QRYKEELVPFLLKLFQSIEKEEILPNSFYE ASIIIPKPRDRTTKKENFRPISPMNIDAK TLNKTLANRIQQHIKKLIHHDQVGF/HC NARLVQHMQINKRNPAYK*NQRQKPHD YLNRCRKGL*QNSTALHAKTSQ*ISVGSS GQGNQAGEGNKGYSIRKRG SQMSLFAE DVIVYLENPIVSDQNLK LISNFSKVSQY KINVLNSQAFLYTNNRQTESQIMSEVPFT IASKRIKYLGIQLTRDVKDLFKENYKPLL KEIKEDTTFHAHG
5247	13298	A	6097	453	545	
5248	13299	A	6098	1	235	
5249	13300	A	6099	3	706	
5250	13301	A	61	1	1194	
5251	13302	A	610	24	452	APSPDAMG/HSLWGKVNVEDAGGETLG RLLVVYPWTQRFFDSFGNLSSASAIMGN PKVKAHGKKVLTSLGDAIKHLDLKGTF AQLSELHCDKLHVDPENFKLLGNVLVTV LAIHFGKEFTPEVQASWQKMTGVASA LSSRYH
5252	13303	A	6100	368	798	LSYTYMHPIQ/RAPRFIKQALRDSQRDL SHTIIMGDFNTPLSTLDRPTRQKVNDIQ ELNSVLHQVDLIDIYRTFHPKSTEYTFFS APHRTYSKIDHIVGSKALLSKCKRGEIIT KIKLELRIKKQTQNRSTTWKLNLLND Y

5253	13304	A	6101	1	666	
5254	13305	A	6102	412	681	GDIIPKCSQPLNIHFHYVFKMR*GSSRPG RGPEIRCFSPAARLLLTAAHQWPQLWAI FQQVALLPHAGGADHVILFSPVSKAT EKIVG
5255	13306	A	6103	489	585	
5256	13307	A	6104	1	1474	MDMLDKGMIQVPVESLECPEHFVQEPV LPSELRSEKQEPWNQPSLDLEPSFATYM ACSM LPAERQDLRPTSLVISHGVSVKDR REHCQCPNYYPPLRNMSPLEHSIKICGGK KPQND SQRTITITKVI V N Q D F K Q P D D T E L SQGSRKETSEASLVTLWELVTAGQTFQ DDRMGTAPVYSSQRERRRRRVISACPT PPLVTPRQTGSGVDLQQTPTDLQLRVLT RRKTNKQKGHPKPHLYVTIKDQRTLH PKSTEYTFPSAPHPTYSKIDHIVGSKALLS KCKRTEHTNCLSDHSAIKLELRKLTQN RSTTWKLNLLNDYWVYKEMKAEIK MFFETNENKDTTYQNLWDTFKAMYSKG FMALNAHKRQQRSKIDTLISQLELEK QEQT HSKASRRQETTKIRAELEIETQKT LQKINESRSWFFEKINKIDRTLARLIK REKNQIDTIKIKVISPPIPQYKLLFILF GTGTQIN
5257	13308	A	6105	1	903	
5258	13309	A	6106	803	1184	
5259	13310	A	6107	1458	1568	TQTNLQEKNTTQSKSGQRV*TDTSRKK TFMQPTDT
5260	13311	B	6108	24	2456	MGVSSGDLKGLLHPRVRVGNEYVTKG QSVEQVFAVGALAKATYDRLFRWLVS RINQTLDTKLPRQFFIGVLDIAGFEIFEFN SFEQLCINFTNEKLQQFFNQHMFVLEQE EYKREGIDWVFIDFGLDLQPCIDLIEKEE RLKPSRKKITKKHTKKRTASLILHAMICC RSLNSSKTKNTKCLNSINQRLKIWSLQK DLMCGTAGRCKTLHGTSQNLNTAIHVVL ALAGSPKDADDTSIYMFYQKHILYCIVD SECKSRDVLQSYFDLLGELMKFNVD AFK RFNKYINTDAKVFLKQINSSLVDSNMLV RCVTLSDRFENQVDMKAALLSIPGFVE RLCKLATRKVSESTGTASFLQELEEWT WLDNALVLDALMRVANESEHNQVFW FEQHGLVSGAEKAPGTTIDQAPRIYRWS DLTRTQAQWQSAMTWSMSAFTETFLTE RDKQSKWSGIPQLLLKLHTTSHLHSDFV ECQNILKPLLVIPRQTGSGVDLQQTLDL QLRVLTVRRKTNKQKGHPHQNPICMSPS SKTKEAKNLDKRLDEWLTRINSIEKTLN DLMELNTMARKLRDACTSFSSQFDQVE ERVSVIDQMNMKREEKFREKRIKRNK QSLQEIWDCVKRPNLRLIGVPESDGENG TKLENTLQDIIQENFPNLARQVNIQIEIQ RTPQRYSSRRGTPRHIVRFTKVEIKEIL RAAREKGRVTHKGKPIRLTAVLLAETLQ ARREWGPINFILKEKNFQPRVSYPAKLSF ISEGEVKSFTDKQMLRDFVTTRPALQEL LKEALNMERNNRYQLLQKHAKI*
5261	13312	A	6109	82	1208	LVEGKLTNRKNHTKTPSVHHHHQRPKC GREMWGQSPHTESLLGHHLVELWEEGH CPLDPRMVDPPACTMYLEKQP TLNASL /WKAARSQVPQGGGKGTKKSETEIQATI REYYNKHLYANKLENLEETEKFLDTYTL PRLNQEEVESLNRRTGSKIEAINS LPTK KSPGRDGF TAEFYQGYKEELVPFLKL F QSIEKEGILPNSFYEASIIIAKPGRDTATT TKNFR TISLMNIDAKILNKILENQIQQHIK KLIHNNQVGFIPGMQGWFNHKSINVIHH IKRTKNKNHMIISIDAGKAFDKIQPFML KTLNKL GIDGMYLKIIRAIYDKPTANIILN

						GQKLEAFPLKTGTRQGCHSYSTLTTPIQH SV
5262	13313	A	611	3	552	HSLFGTSEVINKLRSPDAMGHL/TPPEEDK ATITSLWGKVNVEDAGGETLGRLLVVYP WTQWFFDSFGNLSSASAIMGNPKVKAH GKKVLTSLGRCHKSTWDDLKG/TPFAQA *SELHCGQACMWDPEELSSFLGKCCWV TRFWAIPFSAKEFHPWRLQGFPKSRRW QKMVTGVASALVPSRYH
5263	13314	A	6110	1261	2396	LNALYFLLLPDCPGQN**TASKTNKEEK REESNRCNKK**SNITTNPTEIQTIREYY KHLKYANKLENLEEMDNFLDTYTLPRLN QEEVESLNRPTGSEMEAINSLPTKKSPG PDGFTADFYQSVGSSGQGNQAGEGNKG HSIRKRGSIQVPVCR*HDCISRKPHRLSPK SP
5264	13315	A	6111	1	819	MCHSAIFTVLQPPLVVIPRQTGSQVDLQ QTPTDLQLRVLTVRRKTKKQKGPHQN PICMSPSSKTKATFEDSVWHFAERIIPDP NVIKLRKEELTLNNIRQYYVLCEHRKDK YQALCNIYGSITIGQAIIFCQTRRNAKWL TVEMIQDGHQVSLLSGELTVEQRAPFIQ RFRDGGKETVLITVNCARGIDVKQVTIV VNFDPVKQGEEPDIYETYLQIRGTGRF GKKRLAFNMIEVDELPSLMKIQDHFNSS IKQLHAEDMDEIEKIDY
5265	13316	A	6112	1	1068	
5266	13317	A	6113	3	655	LLSNDQRCSISFNKTRKASATRVYIVLD NSGFELVTDLILADFLSSELATEVHFYQ KTIPWFVSDTTIHDFNWLIEQVXHSNHK WMSKCGADWEEYIKMGKWVYHNNHIFW PVPHEYCAMQVAHDLYAELQKAHLIL FKGDLNRYRKLTDGRKWEFSVPFHQALN GFHPAPLCTIRTLKAEIQVGLQPGQGEQL LASEPSWWTTGKYGIFQYDGPL
5267	13318	A	6114	3	225	GACGRPPFPRLPRGAPP/PAMAAFPSP PASAPGAAPTFFPSLGPWHPALFLTGIN LTCFSKEREKEAQSWY
5268	13319	A	6115	2	624	
5269	13320	A	6116	2	594	NRGSCHRGLKFEGAFKYKMGQIEIDDQV EGLQYLASRYDFIDLDVGHGWSYGG YLSLMALMQRSDIFRVAIAGSPVTLWIF YDTGYTERYMGHPDQNEQGYLGSVA MQAEKFPSEPNRLLLLHGFLDENVHFAH TSILLSFLVRAGKQYDLQSYQERHSIRV PESGAHYELHLLHYLQENLGSRIAALKV I
5270	13321	A	6117	4	310	
5271	13322	A	6118	1	601	LQKWSLEYIQEIAGCRTVPVEVGSRYTD EEWSQTLMTVNEFISKYIVNEPRDVGYL AQHQLFDQIPELKQDISIPDYCSLGDGEE EETINAWFGPQGTISPLHQDPQQNFLVQ VMGRKYIRLYSPQESGALYPHDTHLLHN TSQVDVENPDLEKFPKFAKAPFLSCILSP GEILFIPVKYWHYVRALDLSFSVSFWWS
5272	13323	A	6119	3	306	EIIAFS/DRAED/FRKLGCEVLGVSVDSQF THLAWINTPRKEGGLPLNPLLADVTR RLSEYGVLTDEGIAVVCAPGWKPGS

						DTIKPNVDDSKYFSKHN
5273	13324	A	612	251	488	GGWITRSGDRDHPG*HGE/IPVY*KKLAG RGGGRLKSQLLGRLRQENGMNSGGRAC SEPRSHHCTPAWVTERLLLKKKKK
5274	13325	A	6120	1	774	PTRTKGFAGQGS LG AENAGPRV VIVRAS RGLPTQLSVMASGNARIGKPAPDFKATA VVD\GAFKEVKLS DYKGKYV VLFYPLE LHFCGAPTEIIAFSNPCRGTSRKLGL*SAG ASRWDSHFTHLAWINTPRKRGEALGP L\NIPPALLNGEPERLV*GIYGRG*KTD*G AFAYKGASLFIRLGKGC PF AKITLLIDL\ P VGTLP LDEGFCGLVQGLSQVHK TSHGG KFVPA\GWKALPVATD*APTWM TARKY FSKHN
5275	13326	A	6121	3	306	KNWPPPRFF/YKGPPSSSSSSSSSSSSSS PLTPFFPSSSPGVCPLKGSSSSSPPKK\G RPPSSSQGGKPPFFKPPNFFPKNSPTPG GAPLKPFWKNF
5276	13327	A	6122	1	200	PPHNVPRRWSANLYLTP\SNMVLLTAIAL IGVCVFILAIIGILHWQEK KADDREKRQE AHRFHFDAM
5277	13328	A	6123	2	297	
5278	13329	A	6124	1	211	VSPHVLIRRQSSRHLGSLYLQAPFV*MA GCLLETGSHV*TYKDLHVTITRHLPKLW KTRSTLNFQVARSS
5279	13330	A	6125	1386	2151	DYLCEKHQYRQLCGYLQPCQGS PCVWT PRAGSGRAALRTGMAVLARAAGQRLRA RLPPQAQRARAAAGALRERGLCAPPRPP APGAGRQSPQSGELRVPSTTSSTCRSC WSARPWGSRRGRAVPQRRRNATATGSP RPLRRLRPAASPRRGAASERPNWDP PRTARSRALNLRSSSKVNATLVPCHKET EAQRGVWTGETIPVRTCFGPLIGQQSHS MEVAEWTDKAVNHIWKAPRNTALKMT QTYNDPAD
5280	13331	A	6126	1	1337	MRNKAVGQARAPPAQLAGWAAPFKLL DGRPQVFPEMPQP VAGCTATGP REKLG GPGRPRGRVAASVQRLMNEMNLSPVGM EQLTSSSVSNALPVSGSHLGLAASPTHSA IPAPGILSYLADRPPPYIHPNSINVDGNT ALSITNNPSALDPYQSNNGNVGLEPGIVSI DSRSVNTHGAQSLHPSDGHEVALDTAIT MENVSRTVSPISTDGM AEELTMDGVAG EHSQIPNGSR SHEPLSVDSVSNLAADA VGHGGVIPMHGNGL\ELPVVME TDHIAS RVNGMSDSALS\DSIHTVAMSTNSGPRE SSAVAPVASHFSVHVLF SFIWVSPADAE TLGESLLGLTVYGSNDQDPYVTLKDTEQ YEREDFLIKPSDNLIVCGRAEQDQC NLEV HGNYIAVGNMTPVIEVWDL DIVDSLEPV FTLGSKLSKKKKKKGKKVKKLINI

5281	13332	A	6127	1	2412	MKMNLSPVGMAQLTSSSVSNALPVSGS HLGLAASPTHSAIPAPGLPVAIPNLGPSLS SLPSALSMLPMGIGDRGVMCGLPERNY TLPPPPYPHLESSYFRTILPGILSYLADRP PQYIHPNSINVDGNTALSITNNPSALDPY QSNNGVGLPGIVSIDSRSVNTHTGAQSL HPSDGHEVALDTAITMENVSRTSPISTD GMAEELTMDGVAGEHSQIPNGSRSEHPL SVDSVSNNLAADAVGHGGVIPMHGNGL ELPVVMETDHIASRVNGMSDSALSDSIH TVAMSTNSVSVALSTSHNLASLESVSLH EVGLSLEPVAVSSITQEVAMGTGHVDVS SDLSFVSPSLQMEDSNSNKENMATLFTI WCTLCDRAYPSDCPEHGPVTFVPDTPIES RARLSLPKQLVLRQSIVGAEVGVWTGET IPVRTCFGLIGQQSHSMEVAEWTDKAV NHIWKIYHNGVLEFCITTDENECNWM FVRKARNREEQNLVAYPHDGKIFFCTSQ DIPPENELLFYYSRDYAQQIGVPEHPDVH LCNCGKECNSYTEFKAHLTSHIHNLPT QGHSGSIGPSHSHKWKCSMCPQAFISP SKLHVYFMGHMGMKPHKCDFCSKAFSD PSNLRTHLKIHTGQKNYRCTLCDKSFTQ KAHLGVHMHVIHTGEKNLKICDY/CVDK LFYGGSRDLQGRHVLHHTQERQIKCPK CDKLFLRTNHLKKHLNSHEGKR\DYVC EKCTKAYLTKYHLTRHLKTCKGPTSSF VQAPEEEEEDDSEEDLADSVGTEDCRI NSAVYSADESLSAHK
5282	13333	A	6128	1	1767	MQALIPLESGLSGMTQTSGVSTETGDVVK DMGVNNQSKGRCPWKDHEAAPWSEK PKKRGNEGKSKKFKNNYSTQPARMERK EEILNPPFEGKDGDGTGSIPHSKEIGFTFP KMHDSFSHTPDTPTEAVDRKGGNFQ VNFVELGTLGENKISTVKASTVTEPPAK VTDVSCQEQIQGAGFVPSVSEENKTD ANRYTAVADKPSERSNDGKSSGSAACE KLPTPTPQVVKEGDSFPDTLAKNGQEIAP AQISKSLMVDNYTKDGVPGQERPCKGSA VVPSTSTGGVALPITTAIETVNIHGDHSL KNKAELADSMKNEAGIDEGHVIGESV HSGASKHSVEKVTELAKGHLLPG/CASR RPEPTRRGQSPRR/T/HADRGNFPAHPVN EEKETKEGSVAVQIPDLLEDKAQKLSFC EDQNAQDRNSKGSDSLNNKVDLTLLSP KSENDKLKEISLACKITELESVSLPTPEIQ SDFLHKSVEAPPSEVADTLVIMTASKGV RLPEPKDKILETPQKMTESKTPGEGK KEDKSRMAEPMKGYMRPTKSRGLTPLL PKSTIQEQERHKQLKSAGMNLPGWNV ACGF
5283	13334	A	6129	893	3822	GKGNHATVNLLSFLQRPQVGS LVHPPVV G/HGNQRKSIHVDSLEPQRDLGREAWDI ESTPIMMKKKKKKPKQKRYSPRAGGP SDDDNADKPKGHPFAADTQKSGVLP PTTMGTEYGLVSGENLKRECLVNSSAAR LVAENFVSESLRIPLYPSEEAPKTAISSQS KLRVEEESKSNKSVLQNDKLLKQHE YKQPAPHLKTPVDKSQSVGPLNLKGPL AEVSAYNVETPLDIRLKEGCSFFLDQEV MGVV
5284	13335	A	613	5987	6461	GVNKSWNHWFHLGVREAEHAGVVRT PHHDLVLLPRGMAACALGACSLGAVAL PGHPVAGGVSHGCSSGTTYRGERHRV GRMRQKNRLNPGGGCGEPRSRHYTPA WATEQNSVSKQNKTKQNKHLVHWN RKKWIYLLFALKKYKMSMLCRKS

5285	13336	A	6130	1	1965	MQALIPLES GSGMTQTS GYSTETGDVVK DMGVNNQSK EGRCPWKDHEAAPWSEK PKKRGNEGKSKKFKNNYSTQPARMERK EEILNPPFEGKD GDTGSIPHSKEIGFTFP KMHDS SFSHTPD TPTVEAVDRKG GNFQ VNFVELGTLGENKISTVKASTVTEPPAK VTDVSCQEIQGAGFVPSVSVSEENKTD ANRYTAVADKPSKRSNDGSKKVKNSS PEKHILENKIDATKIHVPMETTGDQGIEG WPIWTKIEIL/RFTCPRT PSELINKSSPLEV LESAA CEKLPTPTQV VKEGDSFPDTLA KNGQEIAPAQISKSLMVDNYTKDGVPGQ ERP KGPSAVVPSTSTGGVALPITTAIETV NIHGDHSLKNKAELADSMKNEAGIDEG HVICESESVHSGASKHSVEKVTELAKGH LLPG/CASRRPEPTRRGQSPRR/T/HADRG NFP AHPVNEEKETKEGSAVAVQIPDLLED KAQKLSFCEDQNAQDRNSKGSDSLNKK VDLTLLSPKSENDKLKEISLACKITELESV SLPTPEIQSDFLH SKVEAPPSEVADTLVI MTASKGVRLPEPKDKILETPQKMTEKSE SKTPGEGKKEDKSRMAEPMKGYMRPTK SRGLTPLLPKSTIQEQRHKQLKSAGMN LPWGNVCACGF
5286	13337	A	6131	1632	2783	VILLSKSLIQENFFFFF*QSFALVAQAGV QWSNPCSVLQPPPPGFNGFSCILPSSWD YRRVPPCPANFVFLVETGFHHVQAGL ELLTSGDPPTSASQSAGITGVSHHAQPAE DIANNVTLFFPLHLFL
5287	13338	A	6132	240	564	NGWEFKHGSPWPGGFFFFFETESRSV A/TRLECSGVIPAHRLCLPGSSDPASAS QLTGTGGAHHHARLIFVFLVETGLRHLS QAGLELL/NLIHQWPWPQELGLQA
5288	13339	A	6133	1	1898	MAASGRGLCKAVAASPPFAWRRDNT RGGLKPEYDAVVIGAGHNLVAAAYLQ RLGVNTAVFERRHVIGGAAVTEEIIPGFK FSRASYLLSLLRPQIYTDLELKKHGLRLH LRNPYSFTPMLEEGAGSKVPRCLLGT MAENQKQIAQFSQKDAQVFPKYEEFMH RLALAIDPLLD AAPVDMAAFQHGSLLQR MRSLS TLKPLLKAGRILGAQLPRYYEVL TAPITKVLDQWFESEPLKATLATDAVIG AMTSPHTPGSGYVLLHHVMGGLEGMQ GAWGYVQGGMGALSDAIASSATTHGAS IFTEKTVAKVQVNSEGC VQGVLEDGTE VRSKMVLNNTSPQITFLKLTPQEWLPEEF LERISQLDTRSPVTKINVAVDRLPSFLAA PNAPRGQPLPHHQCSIHLNCEDTLLHQ AFEDAMDGLPSHSDLGSAKIHTPKDRKC IPGEKSEDEGRPVIELCIPSSLDPTLAPPG CHVVS LFTQYMPYTLAGGKAWEQERD AYADRVFDCIEVYAPGFKDSVVG RDILT PPDLERIFGLPGGNIFHCAMSLDQLYFAR PVPLHSGYAGPLQGLYLCGSGAHPAPY SEILTS LTKRVPIQHVHPQLRLWAVDLA PPQTFGAGSLEGARIY
5289	13340	A	6134	163	513	CLLFFLTPSHFSVFGTPVFD CNRVYAPGF KDSVVGRDILTTPDLERIFGLPGGNIFHC AMSLDQLYFARPVPLHSGYRCPLQGLYL CGSGAHPGGGVMRAAGRNAAHVAFRD LKSM

5290	13341	B	6135	1	720	MGCKHWMTCGRARKEGKDDSYMOTQ WLHRAFAAPPETCPFPLRDHIQTGRDLYI LGTFEKCVFWGGAEREVWRERHQREPG LRAAFAGQLEFPAGVGLAGPALGAAGQ PCWPRGNEGLSTRASGCGGCTGSSSSAS PPVLCSSISHQALAAFLRGRSRDLQRAMP EPPTPSMGSCAAGASPTSTTPCSKEPSID HPRAEECECTARDWQAAPPAALVRDPL GEASWAPESGGDMESLYI*
5291	13342	A	6136	133	311	QLHADKVS RFATHA/GVPWCDHGLFQP QPPPLKRSSCLSLWSSWDYRHAPHPAII CLLL
5292	13343	A	6137	1	1098	
5293	13344	A	6138	2	241	PPRFKRFSCGLGLSSSWDYRCTPPRSANFC NLVEMGFHHVGOAGLELLTSDDPPTLAS QSAGITGVSHHAGPHRFLINII
5294	13345	A	6139	3	333	YFISSHFII SFHYVISFHLITFHLISFH/HHFI SSFHFISSFHLFISFH/HHHLINSFHLISSFH HFISFHLISYLSIFQF/HFHYFMSSHLISSF HLITSHHFINFIISSFH
5295	13346	A	614	180	345	GLSFHMLKKKVYKMYCIYMYICTHTHT HLI*MYINRPSLYDYQFLFYLSQLDSC
5296	13347	A	6140	3	137	GVSPCWPGWSRAPDLK*SAHLGLPKCW HYRRPIHDCGQAPHLHC
5297	13348	A	6141	967	1386	KKKKIFIGHQLRWL*RFFFFFFFETGSHS VPOAGVQWCDHGSLQPSQSPAQRSSNL SLPSSWDYRHLPPCLANFIFVEMGLT MWPRLVLNSIGPSDLPASVSQ/SAGITGV SHRNWWPMKIFFFFQTASHSVAQAGVQ WCNLGSLQALPPAFMPFSCLLPQPPSSW DYRSLPPCLANF/CFGFLVETGVSPCWPG WSRTPDLR
5298	13349	A	6142	278	643	GRQERGERERSSRPLGGRKCQ/HWLAVN AQOKLLALQVEKAKVEVGVPALGILV VAGCSFAIRRYQKKSDSLKQPQNPVLEA AVGVVPVEMSLPHASSSLTLVCLRRSLD PFLCFPLSLAKV
5299	13350	A	6143	18	479	QRTFCKGKWKGAAKILIDLNNLFLCKLE QKGTDLALVIAMENYGLSGSKKGVDLPGA AVDLLAMSEKDIQDLKFGVEWDVDMVF ASFIHVASNVEIRKAILANWSKVPTCPP ELGSYLPRGTETHSYFYISYSSDQIQICKP LHYSYGRNYDTL
5300	13351	A	6144	3	282	RSPPAIGSPPPSAPAPRLPPPPAPPPALPFP ASRPTFPFPLPVSLPVLPSRSLSLPPAFLF SFFCIGVLGLLHTRALSIAAYIKAGAIMQ LYC

5301	13352	B	6145	26	2671	MAAPGAPAEYGYIRTVLGQQILGQLDSS SLALPSEAKLKLAGSSGRGGQTVKSLRI QEQQVQTLARKGRSSVGNLHRTSSV PEYVYNLHLVENDFVGGRSPVPKTYDM LKAGTTATYEGRWGRGTAQYSSQKSVE ERSLRHPLRRLEISPDSSPERAHYTHSDY QYSQRSQAGHTLHHQESRRAALLVPPRY ARSEIVGVSRAGTTSRQRHFDTYHRQYQ HGSVSDTVFDSIPANPALLTYPRPGTSRS MGNLLEKENYLTAGLTVGQVRPLVPLQ PVTQNRASRSSWHQSSFHSTRTLREAGP SVAVDSSGRRHLTVGQAAAGGSGNLL TERSTFTDSQLGNADMMENTLERAVSML EADHMPPSRISAAATFIQHECFQKSEARK RVNQLRGILKLLQLLKVNEDVQRAVC GALRNLFEDNDNKLEVAELNGVPRLL QVLKQTRDLETKKQITDHTVNLRSRNG WPGAVAHACNPSTLGGQGGRTSGVR DQPDQHGLLWNLSSNDKLNLMITEAL LTLTENIUPFSGWPEGDYPKANGLLDFDI FYNVTGCLRNMSSAGADGRKAMRRCD GLIDSLVHYVRGTIADYQPDDKATENCV CILHNLSYQLEAELPEKYSQNIYIQNRNI QTDNNKSIGCFGSRSRKVKEQYQDVMP EEKSNPKGVEWLWHSIVIRMYLSLIAKS VRNYTQEASLGALQNLTAGSGPMPTSV AQTVVQKESGLQHTRKMLHVGDPVSKK TAISLLRNLSRNLSLQNEIAKETLPDLVSII PDTVPSTDLLIETTASACYTLNNIIQNSYQ NARDLLNTGGIQKIMASAGDAYASNKA SKAASVLLYSLWAHTELHHA YKKAQFK KTDFVNSRTAKAYHSLKD*
5302	13353	A	6146	2	355	FYFLRWSFTLIAQAGVQWRDLGSPQPLP PRFKQFSCSLLNSWDYRHAPPRPANFL CF/LVETRFLHAGQAGLELLTSGDPPTLA SQSAGITGASHRNRPVQSILRLEGLLETIV QPPT
5303	13354	A	6147	3	277	FFLETEFRSTQSPRLECSGAISAHCNLQLP GSPHSPASASRAAETGLCHHARLIFVFL VEMRFHHVQSGLELARQAICLPRPPKVL GPQA
5304	13355	A	6148	20	363	LHHFPKPCPAHFSACIHWQHPHTCACT QAHMCKPKH/THTHACTH/ICVLSGTHP WVHTGVCARSSSSS/PSSSSSLRYTRQV HALLHTAQPQRLKASEPTAQLQPGRQE GLTG
5305	13356	A	6149	3	301	STATWAGVQWCNLSLQPLPSGFKPFSC LSLPGSWDHRHLPPCANFLYCFVLVEM GFHYVGQAGLKLLT/S/GDLCASAPQSAG STGVNHRVRLGLLIYIP
5306	13357	A	615	173	338	GLSFHILKKKVYKYMCIYMYICTHTHTH LI*MYINRPSLYDYQFLFYLSQLDSC
5307	13358	A	6150	15	352	DSIFTLVCAEHINFLRAGQHWGCVIDCL HYNKQAVTGDHSSSYAERSSTPENGGRE GTREQGERRGGTWGRGGG/QERPSIPDR QKNQGRGGGNPLSGRGKVKAITILLII
5308	13359	A	6151	20	415	
5309	13360	A	6152	24	156	SSFKVMELCPELVGWSH*LQE*SRGPLR *RTHSSRYMVKRQE
5310	13361	A	6153	128	880	
5311	13362	A	6154	310	719	LRTYPTIRGPVREEKWGYVQTESRSVAW AGVQWHCFTELRGFLVSLTSRMKPRTL AVSVPALKVARLEFVSSDVQRWGFHHV GPAGLELLTSSDLPVSASQMAGITGTRH RAWPWEHVYMDFVHFLKQTEGNLLDL
5312	13363	A	6155	1	169	FFETGSCSVAQAGMQCSDHGSLOPCPPG ISWDPPALASQSAGITSMHHNHPKLFI

5313	13364	A	6156	525	972	NHLGGFKQILMPRLHPMPKSFGLVVSAR QLYFFFFFFEESHVSIVQAGVQWRDLGS LQPLPPGFKQFSCSLPSSWNYRHTLPRP ANFLYFLVETGFHCVAQAGLKLSSGNL PALASQSARITGMSHHARLAVVFFKALL SSSRTRI
5314	13365	A	6157	300	500	DGLCSKQT*NGVPSITNPIKTANQHOGK KQHPIQGNRTAPSSSVSYMKRCELLPKG TGLEVVRESG
5315	13366	A	6158	1	1889	MGLLQGLLRVRKLLLVVCVPLLLPLPV LHPSSEASCAYVLIVTAVYVWSEAVPLG AAALVPAFLYPFFGVLSNEVAAEYFKN TTLLLVGVICVAAAVEKWNLHKRIALR MVLMAKAPGMMLLCFMCCTLLSMW LSNTSTTAMVMPIVEAVLQELVSAEDEQ LVAGNSNTEEAEPISLDVKNSQPSLELIF VNEDRSNADLTLMHNENLNGVPSITNP IKTANQHOGKKQHPSEKQVLTSPRK QKLNRYRSHDQMICKCLSLSSISYSATI GGLTTIGTSTSLIFLEHFNNQYPAAEVVN FGTWFLFSFISLMLVVSFWMHWF LGCNFKETCSLSKKKTKREQLSEKRIQ EEYEKLGDISYPEMVTGFFILMTVLWFT REPGFVPGWDSFFEKKGYRTDATVSVFL GFLFLIPAKKPCFGKKNDGENQEHSLG TEPIITWKDFQKTMPEIVILVGGGYAL ASGSKSSGLSTWIGNQMLSSSLPPWAV TLLACILVSIVTEFVSNPATITIFLPILCSLS ETMHINPLYTLIPVTMCISFAVMLPVGNP PNAIVFSYGHQKIDMVKAGLGVNVIGL VIVMVAINTWGVSLFHLDTYPAWAR VSNITDQA
5316	13367	A	6159	41	570	SLHDSTADSIRTTCQGVISTLKAHYLRRT FQHILEAADGEDPSYIKEFWRNYSIMDA VDMIAWEELKPALMNSMWKKIWPEC VQAQRFSQADNIAQLQKNIVTLARNVAF EEVAEAAVDQLLSHEEDLSNEELMRLE QELAVGEEEREDGPWALWQLTTGRLSA ALSHFEAGL
5317	13368	A	616	363	412	
5318	13369	A	6160	3	367	HASAHAFGQLSCVSKLMRDVCGQPFCSP RGMV/LYLQWGRKYSRIGNSSWQIKEK VWRFSTAFCSVNEWKFADILSMADHLK KCSYNVVEKREEAIPLCMCVTRELTKE GRSLRSVLKPVL
5319	13370	A	6161	74	295	AEDKSQMLLDLRWSYIRTSSSSADRSHA SGPRIAHK WSTVDRNRPRYDSNNELAEK EQLS*ICSICSRVFFKA
5320	13371	A	6162	32	342	
5321	13372	A	6163	184	556	
5322	13373	A	6164	251	1133	PNDSKRLILFRTPWQCLSVRTVARRCT ALTFIASEEKVLVADKSGDVYSFVLEPH GCGRLELGHLCMLLDVAVSPDDRFLTA ARDEKMRVSWAAAPHSESFCVLGHTF VSRISVPHSARALLSSSGDGTLLRLWEY RSGRQPALLSPWPVCRSSVDPQAPQKFA ASRIAFWCQENCVALLCDGTCPGLHLPA GRPQTAVGVQAAAAGVPAPSVGRGFRGD PGAVGAPGLARKPPWCSYRHVGDQWQ SVPESTVLKKVSGVLRGNWPMLERLCR RRRQLSAVSYKAHVPTT
5323	13374	A	6165	1	391	APMAGCLSFYYLIQGGDDKGFSLYTRDG AGLYKEIWKADRPGNAAWNLAEGEFNA PYPMEVIFEDAFNGPKGGYVALDDISFSP VHCQNQTELLFSAVEASCNYEQDLCNFY QDKKRPGWTRVKGKPNML

5324	13375	A	6166	3	1459	KLPPPPGECTFEQDECTFT/AGEKKPEQL AQEEGAEPTSYTGPKGDHTTGVVVSSH ASECPFGLNSDALLPKKICSLVLLTSFL AASADSGTMLLRWGCLKSKIKMSVGLV PSEISLLGLQMAAFLHMAFPLCQCTPD MYLLLTVGNRNHGRQKQIKGALLYWTF TTCRHCAARNLNLSTTCKDKVGEFAKLS KIELLEATEKSIGPPEMHKYHCELKNLRE KEKQLEDLLATKIASKVAKLGILLGMPT LEIGGKEGGWGTGYWLRAEKEDGDYL CIEGSEGLNTEKIVPVMQERNININKKD VHSETPAKGHQLQRPKVDKSMKMGRN QHKKKAENSKTQITSSPPKDPKSSPAREQT CMENEFDKLTEVGFRWAITNSPELKED VLTQCKEAKNLEKRLDKLLTRITSLEKS MNDLMELKNTGRELCEAYTSINSRIDQV EERISEIEDQLNEIKQDDKIREKRVKRNK QSPKKYGT
5325	13376	A	6167	1	393	
5326	13377	A	6168	1	1137	
5327	13378	A	6169	1	1793	MAETAVINHKKRKNSPRIVQSNLDEAA YSLSRDQKRMLYLFVDQIRKSDGTLQEH DGICEIHVAKYAEIFGLTSAEASKDIRQA LKSFAGKEVVFYRPEEDAGDEKGYESFP WFIKRCATAVGRQORTHADKERGAREKG GEKKAKAKKTSGRKRGGGRERKKKGE QEGKDGQRNAQTKGEKRQPHKANTPPK TLQQRKEKKTGDSHRRKKKLFKESEKVL SQEWEHDFVIETMATGARPQLLSAVEA SCNFEQDLCNFYQDKEGPGWTRVKVKP NMYRAGDVHTTGLGYYLLANTKFTSQPG YIGRLYGPSLPGNLQYCLRFHYAIYGFLK MSDTLAVYIFEENHVQEKIWSVLES GVWMQAEITFKKPMPTKVVFMSLCKSF WDCGLVALDDITQLGSCSSSEKLPPPG ECTFEQDECTFT/AGEKKPEQLAQEEGAE TPTSYTGPKGDHTTGVGYMYIEASHM VYGQKARLLSRPLRGVSGKHCLTFFYH MYGGGTGLLSVYLKKEEDSEESLLWRR RGEQSIWLRALIEYSCERQHQIFEAIRG VSIRS DIAIDVVKFQARPCGEMEDTPQQ SSGYSEDLNEIEY
5328	13379	A	617	540	820	KIGPQPGQHSKTL*TIKKKLARCGGTC LWSQLLGRRLRWEDCLSAGS*GCGEL*SY HCTPAWVTERDLVSKTQKNRAITGKLLL DVLSSLIR
5329	13380	A	6170	2	392	RNKKQGYPAFHVFFSTFFYPK*KSGGYQA VKRWTKGVNLFEQEILVPIHRKVHWSL VQYLQDESKTKRNSDLNLEWTHHSM KPHEIPQQLNGSDCGMFTCKYADYISRD KPITFTQVSEDPLHPFTCY
5330	13381	A	6171	2	386	MNLLVERNKKQGYPALHVFFSTFFYPKL KSGGYQAVKR\WTKGVNLFEQEILVPIH RKVHWSLVVIDLRKKCLKYLDMSGQKG HRICEMVLGYLQDESKTKRNSDLNLE WTHHSMKPHEIPQQLNGE
5331	13382	A	6172	3	162	
5332	13383	A	6173	3	407	TRRADPLRTWRWHNLLVSFAHSIVSGIW ALLCVWQTPDMLVEIETAWSLSGYLLV CFSAGYFIHDTVIVASGQSASLLAEYLV HHVMAMGAFFSGIFWSSFVGGGVLTLL VEVSNIFLTIRMMMKISNAQDHLL
5333	13384	A	6174	13	367	KYLFFFLKDHTKVGKRRMSIRLHQNLR GRTKSCLKKLVAGANCRDQDDPSPRNQ QPRSATFRPSPNRCH*IPQ*PYSAQC SGGQFRSLRGLIVEYRSSERHISYRRYAG LCEY

5334	13385	A	6175	3	413	AAIEELCGRQAARAEAVRGLRGPRGLR/ WPLPWHPPAPHAHGAPLARPGARRRSE KPPSEKPLRRSSPRAQEEGPGEPPEL ALLPPPPPPPTPATPTSSASNLDLGEQRE RWETFQKRQKLTSGCRQAPARHL
5335	13386	A	6176	2	445	RPLPWHPPAPHAHGAPLARPGARRR/CE KPPSEKPLRRSSPRAQEEGPGEPPEL ALLPPPPPPPTPATPTSSASNLDLGEQRE RWETFQKRQKLTSEGAACKLLDTFEYQ GLVKHTGGCHCGAVRFEVWASADLHIF DCKYRNYI
5336	13387	A	6177	2	265	FLMESRSVTRLECSSTITAHCNLCPLVSS DSAVSASQVAGTTGMRHHAQLIFVFLVE TGFHHVQGDLHLL/NVIHLPRPPKVLG LQA
5337	13388	A	6178	1	394	WLVGFGFGFFEIESRPVAQAGVQWRNL GSLQSPSKFKRFSFLNLPSSLDYRHTPPS LANFLYLVMGFHHVQGDLLELLTSDP PTLASQSAEITGVSHRTQPRSAILLQSQSS LLPLLRTFISSVPVTE
5338	13389	A	6179	3	1306	HEISLGAICAVLLVIMGLFATRCNREKKD TRSYNCRVAESTYQHHPKRPSRQIHKGD ITLVPTINGTLPIRSHHRSSPSSPTLERGQ MGSRQSHNSHQSLNSLVTISSNHVPENFS LELTHATPAVEQVSQLLSMLHQGQYQPR PSFRGNKYSRSYRYALQMDKFSLKDS GRGDSEAGDSYDLGRDSPIDRLLGEGF SDLFLTDGRIPAAMRLCTEECRVLGHSD QCWMPPLPSPSSDYRSNMFIPGEEFPTQP QQQHPHQSLLEDDAQPADSGEKKKSFTF GKDSFKMRTLGDTSLSLLSEMSSVFQR LLPPSLDITYSECSEVDRSNSLERRKGLP AKTVGYPQGVAAWAASTHFQNPPTNCG PPLGTHSSVQSSKWLPAEEIPENYEED DFDNVLNHLNDGKHELMASELVAEIN KLLQDVRS
5339	13390	A	618	45	364	HHLHFLQRHKSQMRTMNTGLFEILTMLL TTMNLVDIFHEKADVDMAYNAFDDEY LNCTDRMDIKYVVQLLKEEQASHHH*D TECENA*ARWAARMTHIFLPMIDYN
5340	13391	A	6180	21	375	GVSTVGIGRGRLELWAPPEKYTPPGPRS HPLWLWEGGGGSIREDITTSPPHQVPV QSWFDDMGNTLLNLIPIFEELNGAKDV YTSI/GAAAGPLDCPAFKRRPFHYGTFPH CAFTI
5341	13392	A	6181	3	471	HASAHASAHQVYVLKRPYVDEFLRGMG ELFECVLFTASLAKYADPVTDLDRRGV FRARLFRESCVFHQGCYVKDLSRLGRDL RKTILDNPSASYIFHPENAEPVQSWFDD MAYTELLNLIPIFEELSGA*DVYTSI/GAA AGPLACPAKRRPSQ
5342	13393	A	6182	1	1953	
5343	13394	A	6183	3	240	
5344	13395	A	6184	1	462	
5345	13396	B	6185	1	546	MVKPLSLQMVPLHSSLGNRGSLENKNT GVWESAASCCMAGCGGPADGICSEPLG HDQDGRAQSLLLWAKLTRKDRFSSQPR SIPSFDFLKAKALAKQRETIWEKVFSFQ AGVLSPPGSATLLSTLEQGAVGQKPPSV PCLMGLFVEHLTTWQLTSSVQASKSKRE DSPETVIAKQKAQSF*

5346	13397	A	6186	1	1846	MWSVPCLEKVDVLAWTVLCLAVKIKM NKLRSQFRRKKDVYVPEASRPHQWQTD EEGVRTGKCSFPVKNWQRLFIQSLLAMR SLSASCCHQPAVYSSHGTQAVHAKGCL QAHHRACCPSTSPAAAAIFAAATPDG PLLPSRPLVNIEKSQALVRETLSQASA PNSGRAGQPVTVCLS/GANAAWRPALEA PVDTGLWPETQAVSQCLG*EHSACLER KQKREKECGVTATFDASRTTFTREGSFR VTTATEQAEREEIMKQMMDAKKA\QTSV N*TAFPRGRTSTTSTGRLWLMGRPASLA RGMSVWMAAAGLSAVITSWTRPSRRTS VCGVGVTARPATPSQAPLTLMTSAEL*R MFVGNTTSMGTGPSRRPGCQQPAPSCI TSGVLRGT/SAPER/PPCPGPTSEPLVI/VA PASAGATAHGVTAAARSAEVTSPAWC APSTMRTPTTCASASHGQLTGVPPIFTL ARRPSAGLLGWWRWLCMGPQGCS/SP LGPCTRGLQSPPRMAGRQGHGHPAOPP VEEAPSPAPCTASRLTGPASRRPWRLS VPGCLGSPLPFRPVTCSAVQP GARSPGES VLSVVVALASGSGALLAGVKGVLCSPQR APWKTGHL
5347	13398	A	6187	1	1542	
5348	13399	C	6188	539	1039	MPYPAPNPVVGITPSQMVANXFGTAG HPQAAHPHQSPSLVRQQTFPHYEASSAT TSPFFKPPAQHLNGSAAFNGVDDGRLAS ADRHTEVPTGTCVPDPFEAQWAALENK SKQRTNPSTNAFLHVTYRRRLKLNFKQ SLWLCILSIPDREQGVA VKGAKQTLCPD*
5349	13400	A	6189	303	2235	VKIKMNKLRSQFRRKKDVYVPEASRPH QWQTDDEEGVRTGKCSFPVKYLGHVEVD ESRGMHICEDAVKRLKATGKKAVKAVL WVSADGLRVVDEKTKDLIVDQTEKVSF CAPDRNFDRAFSYICRDGTTRRWICHCF MAVKDTGERLSHAVGCAFAACLERKQK REKECGVTATFDASRTTFTREGSFRVTT ATEQAEREEIMKQMMDAKKAETDKIVV GSSVAPGNTAPSPSSPTSPTS DATTSLEM NNPHAIPRRHAPIEQARQGSFRGFPALS QKMSPFKRQLSLRINELPSTMQRKTD FPI KNAVPEVEGEAESISSLCSQITNAFSTPED PFSSAPMTKPVTVVAPQSPTFQANGTDS AFHVLAKPAHTALAPVAMPVRETNPWA HAPDAANKEIAATCSGTEWGQSSGAASP GLFQAGHRRTPSEADRWLEEVSKSVRA QQPQASAAPLQPVLPQPPPTAISQPASPF QGN AFLTSQVPVGVVPALQPAFVPAQS YPV\ANGMPYPAPNPVVGITPSQMVAN VFGTAGHPQAAHPHQSPSLVRQQTFPHY EASSATTSPFFKPPAQHLNGSAAFNGVD DGRLASADRHTEVPTGTCVPDPFEAQW AALENKSKQRTNPSTNPFSSDLQKTFEI EL
5350	13401	A	619	112	322	NSLIAGYILVYVKTPRTQKEKSFLKVLST YIKVAKYKV*ILKSITFLFTTKEYSKINIK MPFTTPFTTPN

5351	13402	A	6190	795	2728	GLSNFFRGRVPVQPLLQFKILIYHRLLEY WWASNPQTPHLGQAVKIKMNLQRQSF RKKDVYVPEASRPHQWQTDEECARTGK CSFPANDLGHAFFESRGMHICEDAVKR LKATGKKAVKAVLWVSADGLRVVDEK TKDLIVDQTIEKVSFCAPDRNFDRAFSY ICRDGTTASHGFCR\CFMAVK/DTQGERV EHMQ*ICAFAALFRRARQKREKECGVT ATFDASRTTFTREGSFRVTTATEQAEREE IMKQMMDAKKAETDKIVVGSSVAPGNT APSPSSPTSPTS DATT SLEMNNPHAIRR HAPIQLARQGSFRGFPALSQKMSPFKR QLSLRINELPSTMQRKTD FPIKNAVPEVE GEAESISLCSQITNAFSTPEDPFSSAPMT KPVTVVAPQSPTFQGT EWGQSSGAASPG LFQAGHRRTPSEADRWLEEVSKSVRAQ QPQASAAPLQPVLP PPTAISQPASPFQ GNAFLT SQPVPGVVPALQPAFVPAQSY PVANGMPYPAPNPVVGITPSQMVANV FGTAGHPQAAHPHQSPSLVRQQTFFHYE ASSATTSPFFKPPAQHLNGSAAFNGVDD GRLASADRHTEVPTGTCPVDPFEAQWA ALENKSQRNTNPSPTNPFSSDLQKTFEIE L
5352	13403	A	6191	1	1825	MNKLQRQSFRRKKDVYVPEASRPHQWQT DEESVRTGKCSFPVKYLGHVEVDESRG MHICEDAVKRLKAQRKFFKGFFGKTGK KAVKAVLWVSADGLRVVDEKTKDLIVD QTIEKVSFCAPDRNFDRAFSYICRDGTT RWICHCFMAVKDTGERLSHAVGCAFAA CLERKQKREKECGVTATFDASRTTFTRE RSFRVTTATEQAEREEIMKQMMDAKKA ETDKIVVGSSVAPGNTAPSPSSPTSPTS DATT SLEMNNPHAIRRHAPIQLARQGSF RGFPALSQKMSPFKRQLSLRINELP/SPT MQRKTD FPIKNAVPEVEGEAESISLCSQ ITNALSPEDPFSSAPMTKPVT\VLAPQS PTFQGNEWGHSSGAASPGLFQAGHRRTP SEADRWLEEVSKSVRAQQPQAPAAPL QPVLP PPTAISQPASPIQNAFLT SQPV PVGVVPAHMQPAFVPAQSYPVANGMP YPAPNPVVGITPSQMVANVFGTAGHPQ AAHPHQSPSLVRQQTFFHYEASSATTSPF FKPPAQHLNGSAAFNGVDDGRLASADR HTEVPTGTCPVVPFEAQWAALENKSKQ RTNPSPTNPFSSDLQKTFEIEL
5353	13404	A	6192	164	282	
5354	13405	A	6193	193	274	
5355	13406	A	6194	3	247	FFFFFNRGFIAALFKITKIWKQPRCPSVSE WDKLWY/YTIEHNSALKRNLSCPQKM RKLKSILLSKRRQSEKATYYITATM
5356	13407	A	6196	57	361	GLTMDTQKDVQPPK\QQPM\YICGECH/ TPENEIKSRDP\RCRECGY\RMYYKKRTK RLGRFLMARWNAGEFQREWPSPYTLGF GSLPHFWIVCYSFSIFALQ
5357	13408	A	6197	2432	3682	NSLILLFFFFRQSLTLECSGVISAHHNL HLPSSNS/P/ASAS*VAGITGMHRHAWPI CIFLVETGFRHVQAGLELLTSGDPPAPT SQSM*ATTSGLILLLSKILFPFHSTKVFK* SCPS*KILKEENCSVINEWFNSESSYTSKE KNNLVPNAC*EI\TM*VATNCDFT/SLL*R SENYPKLFHNNETTSQKIHLKIKISRPATS GQWILFSLVWWRARKG*GILMIHNGILY *TIC*IKLHRLP*GMDYPNQPD/MKSGWD KRMSHTL*F*GKEIVDFQNNQNKSTL YLSVQE**HEEFFFRDLKYNKPSTIKSL VSF/HSLTLFFFFFFEARSHSASQAGVQW GNIGSLQPAPPGLKRSSYLSLSSWDYRR VPPHPANFCIFCR/GWGFGVSPCCPGSSG

						TPVLKWRAHLSLPNC
5358	13409	A	6198	1	632	KYRQDLTVPPGYCTGEQGAGGRPGETEP WLRPPALLPSDFLLCASSSGAVLPVRTQ DPFLPYPPRACPOGQAASSATTSRPCPEV KEAGWGSPGHLARHALSHVPPPARVVL VLRERWHFCGDGRVLLGSRALRERHLG LMGYQLL/PGEWPWPGPWRLTPSLRVT CRPLLSQLPFEELSQRG/LCPQLKSYLR QKLQALGLRWGPEGG
5359	13410	A	6199	2	313	EVRVYDLTQYEHCPDDVLVLGTDGLWD VTIDCEVAATVDRVLSAYEPNDHSRYT ALAQALVLGARGTPRDRGWRLPNKLL GSGDDISVFVNPPGRARQLLLRG
5360	13411	A	62	994	1108	
5361	13412	B	620	180	372	MAKDAGLIEANGELKVFDQNLSPGKGV VSLVAVHPSTVNPLGKQLPKTFGQSNV NIAQQVVIX*
5362	13413	A	6200	401	531	
5363	13414	A	6201	1	864	
5364	13415	A	6202	9	811	YIVTTLRQLGTRGTPGRFIYALNEPTID YGFQRLQKVIPRHPGDPERLPKEVILKRA ADLVEALYGMPHNNQEILKRAADIAEA LYSVPRNHNQLPALANTSVHAGMMGV NSFSGQLAVNVSEASQATDQGFTRNSSS VSPHGYVPSTTPQQTNYNSVTSMNGY GSAAMSNLGGSPFTLNGSAANSPIAIVP SSPTMASSTSLPNCSSSSGIFSFSANMV SAVKQKSAFAPVVRPQTSPPTCTSTNG NSLQAISGMIVPPM
5365	13416	A	6203	299	826	LEGHCHNLSSLQISASLGFKRFSCLTSPS SWDSRNTPPCPANFC/EFLVENGFHHVG QAGLKLTTSSHPPSMASQSAGITGMSHQ AWPTFPVLINFNLSKMCRCMPATHLG QCPSREYKIHSCSCAELEGQAHEPDVG VTISIRKCPVPNALWWKELVPGAQGHGP HLEPEGLG
5366	13417	A	6204	1161	2627	RSDATNWGLSHLCFWFWFLRLSFLFS LPRLECNVTISAHCNLFCLLGSSNSPVSA SLVAGITGRHHAQL/LLYFFFLVKTRF HHVDQADLELLTSGDPPTSASQSAGITG VSHCAR/LSHLCFLPPCLLFY/CYFIYVML LCY*WSLFLVAQVGQVQWHDLSLQPLPP GFK*FSCLSLSSWEYRRSPPHPANFFFFF FLRR/RSRFVAQVGQWCNLDLQPPPPS FKHFSASACRVAGITVACHHAWLIF/IFL YF**RQGFTILARLVLS*PRDPPPSASQS AEITGVSHHAWPILFIYLRQSL/DSVAQA GVQWYNLGSLOPPPPGFKQFSCSLSS WDYRRVPPCPANFLCF**RQDFTMLARL VSIS*PHDLPASASQSAEITGVSHRAWPIF CIFI/CFFEMESRSVAQAGVQWRDLGSL QAPPPGFTPFSCSLSPSSWDYRCPPPRPA NFCIFSRDGVSPWSLSPDLVICLPRPPKV LGLQA

5367	13418	A	6205	24	617	DPVSTKNTQISHMWWCTPVVPATQEAE AREFLENFLSPSTGFECSSLFFFFFFFLLSQ GSHSVTQAGVQWCDHGSLQPQPPGRKP SSPLCLLSSWDNH/RPANFFYKTTVKSP E/FLQLAVVGCFA CARVYSAFQTEKQ SSSVGLHRSSFEISAFSHFPI*VFVPWSP LQYEEPTLSFPPSSIPHCPSTSPND
5368	13419	A	6206	239	1789	ATAPGQIFFFFFFLRLWSLTLSPRLECS DAI MAHCNLKLLGSRNPPTSAS*VAKDY ST HQQAWLISYFFFIETGFRHVAKAGL KLL TSSDPPAPASQSAGIKRVRHHVW PSFSY VNKHLFSRGLRALS YKLK*Q MQLFFNFL SILSHDFVAVPSCHDHL RSPETCH**CSV THLEGLQVHF*L*DV IPVLIQGVSLNSSSS SFLEESQ*DN LILSREWGSHSNLSYSKVI M*HLT ATSSCDTELASASV*VLS*PL*LR LSR*SF*TFLWLLFRDRIHQIFCLFL KRWS L/DSVTQAGVQW/RNHGSLQ PQTPLGSL DTESFFF*ARVSLCHP GLEVQWCNHGSL QASNS*AQVILPP* LPN*LRLQACTIMPG* FCF*ILVEM GLAMMPSLVNS*AQ/CNH PVLASQ SSGITGMRH CARLGRES*FDPLH *TVCPICNFFFLRRSFALVAQAGVQ WR DLSSLQPLPLGFR*FSCSLSSW DYGHP SLRSANF/CVFLVEMGVSPC WTGWS*TP DLR
5369	13420	A	6207	2	208	LEHALRPSSKMLLKCSQGCTPQEPNP PRI KRASSLNFLNKSVEDPTQHGGQ VFLSA ALSAPAPWTSPH
5370	13421	A	6208	1	419	SAFSVAVTKKLPTGAACPIKFTKIL MNE GGHYNASSGKFRICGVLGIYY FHLHITL GNKDLAIGLGAQRPST ASGPLMPTGN HDVSGSTILALKQ GDEVWLQIFYSEQN GLFYDPYWT DSLFTGFLIYADQDDPNEV
5371	13422	A	6209	756	966	
5372	13423	A	621	39	460	GVYLKLSINTVGKDKEKVRHHHPIT TQL QCGIQGHNLWVVTAASEIRSF HLSRSSRF RRFKSIFCHVTRSGK SMLQMFTFPEKKN DFSGCPVRPR GRGRGEGAVRSAGRRG*A RAGAG PGGPGRGGVPALGRVAPGLVPN
5373	13424	A	6210	24	365	PTEY/ENL/FPCIKEAF/VVEEWV KETLAV L/WPAKQYPFVTPIEERIL MEEGKAFPPSR STAKQKLDGNPV SPTPVIGLSPTPNKEE KQPDWP LEPTGHLDGARDTAGPSWLH HRF
5374	13425	A	6211	32	188	KIFFFFFFLPPQFKILFKRPTGLR VPKGGR RALGGSPKGAKKAWPTR RLPSFNGYLE GSSNGASTESPGN FVPGKTLQPPGVELG RGRWTAQ GQPSRPVALGA*KL
5375	13426	A	6212	122	339	EKGFWFCAQGGKNLPGGNSLEPSA SGL KEIFGLNLLNNWE*RGGPKT PGNFWIWK KGGV*PLWPGWG*NPGL
5376	13427	C	6213	56	118	MKALPSSQSCGPTSVNSPFH*
5377	13428	C	6214	345	410	
5378	13429	C	6215	7	438	
5379	13430	A	6216	2	80	
5380	13431	A	6217	3743	4059	GCAVFFFFFFFLRWSLLPRLE/CSG TVSA HCNLHLLGSSSSRAAASQV AGTTGMHH HARLIFVFLVEMGFH VSNS*PQAIHPPQ RPKVLGIIRD NRHLGLMEWSF
5381	13432	A	6218	3	402	DTMVHLTPVEKGAVTALWGKVN VDEV GGEALGRLLVGYPWTQRF FESFGDLSTP DAVMGNPVKV AHGKKVLGAFSDGLAH LDNLKGT FATLSELHWDKLHVDP*NFRLL GNGLD*MLAHKFGKKISFNQKLG

5382	13433	C	6219	295	618	MARKCSVAFSGGPGCTWDNLKGTFAHT EVSLHCDKAAPWPEELSGSWGNAWS CVLGPFTFGKRISTPPVAGLPNQENWLA WCWLNALGPTSNHLSLAFLAGPISN*
5383	13434	A	622	138	320	GFFQGAQKKRVHPKGPPGKSRF*KFFRA GPGGSIWNPHHLGGPGGPNCWPPGFQTP PNNPG
5384	13435	A	6220	2	337	IKKAL*HE*LREKKKSPIRTSQSSKAP*NL PRSSSSSESSNNYQLL*AHKLQKVKEMG KLETPNLPLLSQKVAEPLNQPTSSKIET LIKPPYHPEKSYGHDEVTAKFSRA
5385	13436	A	6221	1	2349	
5386	13437	A	6222	2	1802	
5387	13438	A	6223	5175	5804	IANNKDALRKTWNPKFTLRSHFDGIRAL AFHPIEPVLITASEDHTLKMWNLOKTAP AKK*EYSTLTLEFYFK*HLSILLYSI
5388	13439	A	6224	3	115	HETDYHKQPWQGEISGIVSTESQ*WGLG GGEVKVKWE
5389	13440	A	6225	2	28	TIADRELRYSEDEGGRRRGE*REEEGEA ARRKRVAKQVGKRANEERKTEERWGD REGRRERRSEEMEVSGKERGHATSGREE KENTG*GPRAEI
5390	13441	A	6226	1	236	RTRGRTRGSTHAFVRQLMQRNLDTGPI MAGHDNQLQKENSTPDSSLPETSNEKH ISPENMSLKTLRNSNP*DLYDEI
5391	13442	A	6227	3	178	LFGYLPK*VDNMSTKKPCTWIFTLALCIT ARTWKQPRCPLVGKWIRCSAEALGNRS LI
5392	13443	B	6228	1	1050	MVSISWPRDLPASASQSAGITGLIGALVL SVGIYAEVERQKYKTLES AFLAPAILILL GVVMFMVSFIGVLASLRDNL YLLQAFM YILGICLIMELIGGVVALTFRNQQLLRQ QVLSHTLGCADLSDGPGSGPVKMFMGV PVIPAPPELLASLRLSRGYGLVLSWLEP RYEKMISGMYLGEIVRNILIDFTKKGFLF RGQISETLKTGRGIFETKFLSQIESDRLALL QVRAILQQLGLNSTCDD SILVKTVCGVV SRRAAQLCGAGMAAVVDKIRENRGLDR LNVTVGVDGTLYKLHPHFSRIMHQTVKE LSPKCNVSFLLEDGSGKGAALITAVGV RLRTEASS*
5393	13444	A	6229	3	250	SLCQPGWSAVADSRLTASSISQFTPFSC SFPSSWDYRRLPPRAIFLYF**RRGFTVL GWSRSPDLVIRLSRPPKVLGLQV
5394	13445	A	623	24	452	APSPDAMG/HSLWGKVNVEDAGGETLG RLLVVYPWTQRFDSFGNLSSASAIMGN PKVKAHGKKVLTSLGDAIKHLDDLKGT AQLSELHCDKLHVDPENFKLLGNVLVT LAIHFGKEFTPEVQASWQKMTGVASA LSSRYH
5395	13446	A	6230	135	466	GIDTILTLNQN*SLKTRQ*FTLIIF/IFFFL RWSL/DSVAQAGVQWRDLGSLQAPPRG FTPFSCSLPSSWDYRRLPRPANFFYF** RRGFTMLARMVVIS*PRDLPAEFL
5396	13447	A	6231	593	1030	KCNSSSLNMNEFKFNPFCKMKNSSLIPL GLSAIKVSNKTNT*NMITI*ILWIIFFFFLI WSL/DSVAQAGAQWCHLGSQAPPEFT PFSCSLPRSSWDYRHPPRPA/NFFVFLVE RGFTVLARMVVIS*PRDLPALASQSLWII L
5397	13448	C	6232	17	145	MHRDLFFNIQFISSVYTSLYLLEKCILCKF SIKTLGLIHTMW*
5398	13449	A	6233	82	377	IPGLKRSLHLSLLNSQSCATLPSYFFFFFF FFFYFLERRDLAMLPRLFSSSPGLK*SLH LGFPEHWDYSHEPPSWLLFFFIFFNNRRVF LLNVKFYHVM

5399	13450	A	6234	281	1102	RMNIFPWGGWPLGHSQQATLTGPPGVC SPPNPRQNKGRPSLTWKSACGMFSICF FCSVTKTFLKLGPQRKSSKTTYAT*DI LKRKVKLCECRPSFLPFFTAWKPLRICW GVAEEGLSSLKEGMLVDSLQPRKPRRCP LPHNRLSTAPTFFDPESIPTDPVTLHPLCP KEQRDPPELPSLGEAPWR*SLPFLHSTPC SLKECETMKPHMCRSPCRGVLTPSATCA QWPDQGWGPVIGAPFSDEVTVCSNQLL LPEAPACSGNQCLSWFKK
5400	13451	A	6235	2	260	LSLTQAGVQWCDHSSLQP*RLLSNWDH MHAPSCLAIYFF*ETTSYYIAQSYLKHLG SSNPPTSASQGTAITGISHWARLDTSQFG H
5401	13452	A	6236	3	224	KSCPGTTPGNGAGASLEDLWRSAGRW GGTSKPCPLSAGCPLAFGPPARLTGASM PPLSALNG*ERRKRQPL
5402	13453	A	6237	3	307	EAWRMSWGPP*ER*PLPSP*GVCSSC/AP PLPSVSAGLGEPRPPDVEDMSSSDSDSD WDGGSR/PFTISTPRPPRLGCLLHAVLFL ARW/PSLPSV*PRTPHCEH
5403	13454	A	6238	265	315	
5404	13455	A	6239	359	785	GNPSWSFPKAMDSPSLRELQQLLEGTE C/GDPCPEAW/PGMSWGPP*ER*PLPSP*G VCSSC/APPLPSVSAGLGEPRPPDVEDMS SSSDSDSDWDGGSRLSPFLPHDHLGLAVF SMLCCFWPVGIAAFCLAQKVSCLVGLG GDWA
5405	13456	A	624	60	548	APSPDAMGHFTEEDKATITSLWGKVNVE DAGGETLGRLLVVPWTQRFDSFGNLS SASAIMGNPKVKAHGKKVLTSLGRCHK STWDDLKGTFAQLSELVHCGQACMWD ENFKLLGNVLVTVLAIPFSGKEFHPWR LAGFPGQKDG*LGVAASALVPSRYH
5406	13457	A	6240	3	277	
5407	13458	A	6241	8	370	RLGEEKAATGVVVHGLDCFFSPRAPTRP GSRLSQDPPGCEI*NPSWSFPKAMDSPSL RELQQLLEGTECEDPCPEAWAGIELGSP FKRDSLRCRVPEGFCSSCSPPLPSVSAGLG GTKAP
5408	13459	A	6242	1	351	KTGSHSVAEAGVQWHHPSSL*PQPPGFK QSPHLRFPKCWDHRRTPPCPNFFDLR* RWGSHHVAQAGLELLNSRDPPASTSQSA RITAMSHRARPVSTFLSTSTSCPVLSTFH RSLI
5409	13460	A	6243	2	1036	SHTLSYLVELEVRMDLKAKMPDDHAR KILLSRINNYTIPPEEIGSFLFAINKPNAP IWLILNEAGLYWRAVGNSTFAIACLQRA LNLAPLQYQDVPLVNLANLLIHYGLHLD ATKLLLQALAINSEPLDLF*AGEMAYL ALKNISGALEAFRQALKLTKCECENSL KLIRCMQIYPFLYNITSSVCSGNCREKTL DNSHDKQKYFDNSQSLDAAEEEPSEGT DEDPAFSVENSGRDSALRLESTVVDES HGSDEMENSDETKMSEEILALVDEFQQA WPLEGFGGALEMKGRRSRLTRNTGAEE RSPGWKWPETLAMETAEVKMMKQONG LHSRSNV
5410	13461	A	6244	31	372	KRVRLGWVAHTYNPSTLGGQGRIT*TQ EALTSLDNIVRTHLYKKFYKLAQVWAC GQTCLEGGKEGYVNMSNVHTGGQGDPC GLLGSLSLGRIFGCTWDSYRHAAMIFG KLK
5411	13462	A	6245	816	929	DRVLLYCPGWNAV*TWLTVASASSAQ AILLPQPPCLA
5412	13463	A	6246	3	119	RRGLAVLPRLVLNSWPQVIFLPHAPKVL GL*AQL

5413	13464	A	6247	2	285	RSVLCECRNSVVSQIWGNRLYLVE MYPI MKVEKWAGCCGSCS*SQHFGR LGVDR LRSGVQQPGQHDETPSLLKMQKWAGV WWWLPVVPACSL
5414	13465	A	6248	3	437	RPRRLFFLRWSFALVAQAGVQWHD LGS PQPPPPGFK*FLCLSLPSS*DYRNVPPHPA NFVFLVETGFCHVGQAGF*LPTSGDL SA WASQSAGITGVSHLARQAASDFNSRDRR GSQIPSN SQDANQNMEMLNKLKDFPIVT CNT
5415	13466	A	6249	3	459	VLITANLIPAKQCFDCNLFSTFSSVTTEAF VFLCLLVTCVTCMNFLFIIFVHFFSRRVV FFLPILGAPCKMGILFMIQTFLPSLNIFQF GSKCIQQYRILNFYAM*SVTLFLWP IVYK YSFSTISRPTLYNRSTLLPRKDRWK GAR QQTPQ
5416	13467	A	625	32	452	
5417	13468	A	6250	2	342	FKRQSLTLTPRPEYSGTHAHYNLKLCS S NPPSSASQEAGTTGT YHDT*LIF*FFVETG SPYVAHAGLELPVSSNPPTSASQSGRIID MSHHIRKTALLSGKEWTRPPTHLL
5418	13469	A	6251	2	207	ARGDPESTVAEFTPTIPHCSMATLIGLPI KVKLLRSLPQSFKVSW S*APGVRPGIEGL LLRMGTGRA
5419	13470	A	6252	1	90	RWLIPISPAL*EAEAGR LLETRSLRPAWS T
5420	13471	A	6253	3	290	RQGFPLCNHKGTVTADLQLPPLPKL*ISH LSLLSSWNYRCTPPHPADF*FFVERRSHY VA*ACLELLCSSDLPALISQRVGITGMST TPGPICLL
5421	13472	A	6254	2	378	AGFTAHVILNHPGQ*SAGYAPVLDCHT AHIACKHAELNEQIDRRSAKKLEHGPNF LNSGDA AIDDMDTVKPMCVESFSHYSPF GRFADRD MRHTVAASVIMALDKKAAV AGKGSNSGQKAHKAK
5422	13473	A	6255	3	735	NASGTTLEALDCILPPTRPD KALRLPL QDVYKIGGIGTVPVGRVETGV LKPGMV VTFAPDNVTTEV*SV*LSHEALS EALPG DN/VGAFNVKNVSVKDVRGNVAGDSK NDPP/QEAAGFTA HGILNHPGQINAGYA PVLDCHTAHIACKY AELKEKIDR RSGKK LEDGPKFLKSGDAAIVDMVPGKPMCVE SFSDYPPLGRFAVRDMRQTVAVGVIKAV DKKVAAGAGKVTKSAQKAHKAK
5423	13474	A	6256	328	621	PVFLFCFVLFETESRSVAQAGVQWRDLG SLQALPPGSTPFSCSLPGGWDYRCP PPC SANFFCIFS RDRVSPC*PGWSQFPDL MIR RARPLFLKNRKL
5424	13475	A	6257	1	1245	
5425	13476	A	6258	1	248	FPDQPIHIVYVPSHLHHMLFELFKV*YFTI IEILPFKKGLTSYIFISFIIRHKTEASISFPK NASSPPKRKKLYSQCLTKYM
5426	13477	A	6259	1	1456	
5427	13478	A	626	3	570	HLSGTSEVINKLLVQTAMGHFTEEDKA TITSLWGKVNVEDAGGETLGRLLVVYP WTQRFDSFGNLSSASAIMGNPKVKAH GKKVLTSLGDAIKHLDDLKGTF AQLSEL HCDKLHVDPENFKLLG/NMLLVTVLGN PIFGKEFHPWRLQASWQKQKMAEDGD CSWPVPCSSRLPLSSLAHDGRVFQG
5428	13479	C	6260	63	302	MIYKEKRESVSKEDLARATLVTTNNIGS VARMCAVNEKINRVVFGNFLRVNTLS MKLLGICTGLLVKRSTKSIVSXT*

5429	13480	A	6261	1	2063	MGYGVTAFFIWAFSRVLSSCPASKKNEL MLTAMDICALSLRCATEDPGVAMGRRP ACCYRYCKNKPYPKSRFCRGVPDAKIRI FDLGRKKAKVDEFPLCGHMSDEYEQL SSEALEAARICANKYMKVSCGKDGPHIR VRLHSFHVIRINKMLSCAFRAHASKCFQ NFGNMIYKEKRESVSKEDLARATLVTTT NNIGSVARMCAVNEKINRVVFGNFLR VNTLSMKLLAYALDYWSKGQKALFLE HEVCVETVNDGQFHSVELVTLNQTLNL VVDKGTPKSLGKLQKQPAGGINSPLYLG AFPWFGMDIGGTLVKLSYFEPIDITAEEE QEEVESLKSIRKYLTSNVAYGSTGIRDVH LELKDLTLFGRGNLHFIRFPTQDLPTFIQ MGRDKNFSTLQTVLCATGGGAYKFEKD FRTIGNLHLHLKDELDCLVKGLLYIDSVS FNGQAECCYFANASEPERCQKMPFNLD DPYPLLNVNIGSGVSILAVHSDNYKRV TGTSLLTGCESFEEALEMASKGDSTQAD KLVRDIYGGDYERFGLPGWAVASSFGN MIYKEKRESVSKEDLARATLVTTTNNIGS VARMCAVNEKINRVVFGNFLRVNTLS MKLLAYALDYWSKGQKALFLEHEFGY NIGVIS/SS*DSHTGLSQLHFEREVRRLSL* GFAHVPLALVCGHLPQW
5430	13481	A	6262	2	527	ILAVHSDNYKRVGTGSLGGGTFLGLCS LLTGCSFEEALEMASKGDSTQADKLVR DIYGGDYERFGLPGWAVASSFGNMIYKE KRESVSKEDLARATLVTTTNNIGSVARM CAVNE*INRVVFGNFLRVNTLSMKLLA YALDYWSKGQKALFLEHEGYFGAVGA LLGLPNFS
5431	13482	A	6263	2	186	RNGLRYRQPI*CLIAENFPGLARDIDIWK LETQGVNRFNLKRSSQRQMIVKLSKVK NREF
5432	13483	A	6264	3	180	EMGKGIDSLFNEIAENFPGLARDIDIWK LETQGVNRFNLKRSSQRQMIVRLS*VKI
5433	13484	A	6265	3	474	GTDVGKVKAHALSHKKLCLKMTQVTT QWLEILQRLCLHDQLSVQHRGLVIAYNL LAADAELAKKLESELLEILTVVGKQEP DEKKAEEVHTARECLIKCMDYGFIPVS *TATLRDAGSGPVLCRVLGWLSPGESG HLGIAVTMKSQYKGKT
5434	13485	A	6266	2	651	HSEGRQRKRVRQKTDTVREKGRERER QTGRERE*DRRQTQ*DRQGRERDKDR DRDREKERDRQTEKETQERQRRTERN RQREGPSPVAIQCLFFHFLFFSFFLSCIS VCMDVCMYVCMYVCMYVCVYLFMYRI YLETGSHSVAQCSAVVRS LGHCSRLRP GSSHSPASRVAGVTGACPTAPDSISYF QVRDGGFTTLARAGLELLTSG
5435	13486	A	6267	56	901	EEIAVSILLPSALPAPATVGPVALVDGL GGWLCQCQAREQPAE*QPGVLVPPGGR ERQGCSCFRGQSLALLSSADFTGPGYK PHLSKENLVKIIQLDKKPQEGVFPTLGV SMRIKGRDCRLSSIRSPRVLSPADRFSMC FPTVKDSVQRTSASAPSSLMIAAEKC HSSE*PTASGSPQQHQTHPGATGPAPLQ VETQYTRLSSGLAGPRTLSESECSKPTL EPKAFWVNKAKFCLCYLVVSPQLIPRHH GSDMGSHTFEIPLLARKGCPQAVW
5436	13487	A	6268	132	378	YHSQRRCRRGVITVLSKSKARSRRSRMKQ YKNETVKDKGKYHKNVSMISLK*LEKP VRPLELYYYYYYYYYYYYYYQVLS
5437	13488	A	6269	3	397	QRDLTRHISLKSKTGVHLPENLNSARRI RNISGHRKSETEKESGL*PALRQILNASW RKVIWEQVIQLVS*TTRELRRG*LSVGID DVGVEVTVLVVVFLCSSTIVALLCFSYV SCLCPCWCLLSLCSF

5438	13489	A	627	62	281	SGVYFSFVQRLKTLTQHLLIFGFLP*EYPTLTTFFEGEHSKKHPFLTRKWDAEDVD RKHVWSKSDLCWVI
5439	13490	A	6270	2	250	KKARRSGVILAHCSLELPGSSGSSLFSPA SSWDYRSAPPPSNIFLLF*GRVLTMLP RLASNSWAQAILLRWPPKVLGLQV
5440	13491	A	6271	118	184	QKEKL*KMGAVLKSLCNASIILIRNANKC NNRRKSYQPFSSFMNIDAKVLNKI
5441	13492	A	6272	798	1096	KIMLEHLYSFEEASRSVIQAGVQWRDL CSLQAPPPGFTPFSCLSLQSSWDYRHLPP HPTNFFCIFSREVSPPC*PGWSRSPDVVIC LPWPPKVLGLQA
5442	13493	A	6273	3	163	HASAHASGHASGGAEGKQAEVANQDST EDLPAENGEAKTDDSPASDEAGENDA*S DEAGENDA
5443	13494	A	6274	3	330	INIRFYLQSIKASARSTQG*VSSCTKLQIF FFFFFEMESCSVTQAGVQWRNLSLQPL PPGFKQFSCLSLPSS*DYRCPPPRANFCI FSRDGVSPC*PGWSQTPDLR
5444	13495	A	6275	167	362	SPYGKSNLLEPSASRFKQFFCLGPLNNW DYRLFPPFPNGFVFKKNRVFFFWPSLV* TPDSRGIP
5445	13496	A	6276	2	354	
5446	13497	A	6277	196	321	EQTKAKCPGAHEQVKN*NN*GHHLLSPA HFSHLQLKQFDKMI
5447	13498	A	6278	1	923	MERWRDRLALVTGASGGIGAAVARALV QQGLKVVGCVARTVGNIEELAAECKSAG YPGTLIPYRCDLSNEEDILSMFSAIRSQHS AVDICINNAGLARPDTLGSGTSGWKDM FNVNVLALSICTREAYQVHEGSGMWT GHIN*HQ*ACLATRVLPVSVTHFYSTATK YAVTALTEGLRQELREAQTHIRATWQLR REEAAAGYQAAITVKLGFCGLHPLPSTS PRPGKAQPLRRPSLLAQCSISPGVETQFA FKLHDKDPEKAAATYEQMKCLKPEDVA EAVIYVLSPTAHIQIGDIQMRPEQVTY
5448	13499	A	6279	28	311	AGVQWCRLSSMQPPRRLKLSFHLSPS SWDYGCTPIARLIFVETGFHHVA*AGL KLLSLSNLPT*ASQSAGITGMNHQAQPMI SIFKSSSFG
5449	13500	A	628	1	395	
5450	13501	A	6280	1	304	
5451	13502	A	6281	62	299	LFFSPQTHPTQTAFSSVDLHTHCSYQM MLPESVAIVCSPKFQE*V*RAWFWVFQG GSREESLRGKGLYSCGLVLCKIP
5452	13503	A	6282	110	276	QSETLSQKKKKKKKNW/YKCGGTHL/LI QATREAEALLQTGGRGCSEPRLHHSTP AW
5453	13504	A	6283	380	507	SMNPGSPVCVMLITRIP/FCIAHAHLRCC MVL*LHHFHFRLSIC
5454	13505	A	6284	14	235	DRVSLCHPGGGGSELRSCHCNLAWVT EQNFVSKQKEKKR*LLYT*LVLPMSDGL HVAQDSFECSSSTQICKLS
5455	13506	A	6285	494	789	DHRFAPSHLADFYFFCRDGVVQ*NDLDS WQA*PPGLKDHLPS*DHRFAPSHLADF YFFCRDGVVQAGLKLSSSNVPALASQS AGIIGVNHCTQPTLCLFKMMYLFNFCHH WVLHLPakeipePVFKLPRVFTPFNCLS K
5456	13507	A	6286	3	107	HIQLCR*LIHTHTHTHTHTHTQFYLFK** HSAC
5457	13508	A	6287	2	214	VDFFFFFFKLDRVSOCCPSWKFSG*WL FTRTDHRTLPTPGIKQSSCLSPSRWDY KCVPHVSSLSPS
5458	13509	A	6288	3	213	LLKQNKH*SRILYPTKLSFMNEREIKSFS DKHMLREFVTRPDLQEMQKGVNLNKT

						KGWHAPE*NLLKA
5459	13510	A	6289	1120	1668	SGDALFPLFFLFNFRVTKLRSSSLWMHLG KQLPEPPNSRPTVETQKGSS*DT/PPR*SP *ACFHNSLFPRFG*PTLI*QEHLTTCLL/PG DFFFFFF*DRVLP CYPGWEYSAKTMAHG SPNLE*SSHLSPSSWDHRRMPLCLAN* KKKKKFQRHGLLMPLKLVLSWAQVIV LLWPPKVLGLQG
5460	13511	A	629	27	121	APTPDAMGHLTYED*ATTISLWCKVNVND DSG
5461	13512	A	6290	186	297	PNLG*LNPPPPRLKHFSCGLPSSWNKKA IACHGAK
5462	13513	A	6291	59	132	
5463	13514	A	6292	1	335	
5464	13515	A	6293	1	457	FETRAGSIAQAGVQWCHLGLLQPPPPGL KRSSCPQP*VTWDYRRTSPSPG*FLYFL* KTGCHHVAPGCLKLVSDDLPLASQSA GITDRHQPPCLGPKLWTLRKLGDIFLW FHDNLGYTLGRNTHFSTSRVITVFRS FKHSTPDFSG
5465	13516	A	6294	76	343	YTFSSFLYFFTFPLDNSKPKIFFFFFFFF FFFKETWIVLIGLNAGYM*TPQK*EALL GNTITHVTRLAKHSVLLT*IE*VHDSTF
5466	13517	A	6295	362	561	LEHNIFLSFETDSRSVAQAGLQWCNLSL QLLPPGFKRFSCISLVS*KAFCGPPQLLN FTPIVQY
5467	13518	A	6296	3	349	FFLETEPSCSVAQGVQWPDGLSLQPHL PRFK*FSCLSLSSWDYRHAPPHSANLYI FSRDGVSPHWPGRSQTPDLRRPTLLSLPK RLDYSVSHRAQPWPYFRNKEEARPNPFF S
5468	13519	A	6297	42	266	
5469	13520	A	6298	106	860	RRRRLPSVAIMIIYRDLISHDEMFSDIYKI REIADGLCWEVVEGKMVSRTEGNIDDSL IGGNASAEVGEVTEGTEQHS*SLVVDHC HRTYHLAVKASFTKEAYKKYIKDYMT INQQGNLQQRPERSKTFY*QGAVEQIK HILA*FQKTTQSFMEINMNPDMVALL DYRED/GVVTPYMIFFKDGLRNGKNVVK CGQLFWDLSPVIINWASAWSSTQHQLK TKWGLMVIFELLHFILDWGFLEVEAIVF
5470	13521	A	6299	10	281	SRSFFLSFFLFVEMECHSVAKSGMQWRN IGSLQPPPPGFNQFSFLSLPNSWDYRCLP LHLANFCIISRDKVSPCWSAWFSRST*PT PDLK
5471	13522	A	63	547	644	IPGRPWR*L*S*PVILRLQPQATSGG*MVR ASL
5472	13523	A	630	128	379	FNSRPSLRIGLFCITCSLWDCFWCCWIHA SLYSVIRSLLSFGTLVCFSLFCVAFLSFSF *VVLFFLLFISSGFFSFVFLVFLF
5473	13524	A	6300	3	111	FIKIHLPLMLPRLV*NSWPQAILLPWPPK VLGLQA
5474	13525	A	6301	2530	4923	TVPHH/AFILFFF/CFFERESYSAQGTGVQ WHNLGSLQLPPGFK*FSCLSLPSCWDC GHGGVSL
5475	13526	A	6302	2	300	GSFALVAQAGVQWWDLGSQQPPPPGPK QFSCSLSLSSWDYRRALPWLANFVFLVE TGLHHVGQAGL*LLTSSDPPALASQSAGI TGVGLASTYFIEVI
5476	13527	A	6303	1	453	
5477	13528	A	6304	305	432	FLHFK*MMNNMGGDEDVDLPEVDGAD DVSLKILFSVYFHTIK
5478	13529	A	6305	3	306	
5479	13530	A	6306	1	122	TRPEFPGRTPPSQKG*GKKEEPET*KER TGPSEKGETKA

5480	13531	A	6307	2	392	CSCSAEAASSGGAAPVRCFTFCFTDIVI MPKKGSPENTEGKDGSKVTKQEPTRRS ARLSAKPAPPKPEPKPRKTSKAKKEPGAK ISRGAKGKKEEKQEAGKEGTAPSEHGE TKAEEA/QKTESVDNEGE
5481	13532	A	6308	3	426	AGNSSIQGHGGWTLRHSILSFLSLLPFSR GPQCMGAVQPLVLKQPRDASLRGCLLG YDSTATGLY*ILCNLRRHPGVMPSCGAR VLRDHNPEIDIEWLSCSLLEVLSGSLST PGLTLADQAGHSGGIMPLEGSLRSDCC
5482	13533	A	6309	3	372	HAGLGAHPLHHPVIOQEGFLPAPRGFGY RSEVD*IRIPAESTGQNSQCQLRK*KDDS YFHCYFCGCVCTCRGLQSTSHQCQA AL*LLLPVCLTMLRCISSLIYT*NLKTVHS VRLNFIYN
5483	13534	A	631	1	371	RQGPQGGRAAPRPPMPGPPLSSARHALP LGSWESWCCCLIPADRPWDRGQHWQL EMADTRSVHETMMQASRKEIQSLPKNG SFPSTNEMRLRYSSYNQASE*P*KLSRP GLWDPIGRAKWD
5484	13535	A	6310	1	230	SGRPFLFFQGKERVYFIPVVVLFYTVVV Q*LRKNVVRWQKTMEPPRSWLMQLGH TEEGPGYPLLGETETKLFRTA
5485	13536	A	6311	2	100	RRPFFFFFASCI*NLISPNVQLSNFTCILR N
5486	13537	A	6312	2	192	
5487	13538	A	6313	1	451	
5488	13539	A	6314	231	1335	
5489	13540	A	6315	636	852	FRGSGPRDKTPNCLISLLFSWQPHYFLQR FLYAKLLGLLAELRSINEAYGYIYQHIQG LSAMMLLL*EICS
5490	13541	A	6316	1	690	
5491	13542	A	6317	3	302	GFRGCKPQALAASTWC*LCSCTEVKN*G LGTSTWISEDVRKHLDVQAEVCCKGGA LVDNLCQGSTEGKCGVRAPTQSPQWGT AWWSYQKRATILQIPEW
5492	13543	A	6318	1919	2245	PMQRSP*RT*WS*KPWQENYVMRAQDS VADSINWKKG*QRLKIK*MK*SKKRSLE KKE*KEMNKASKKYGT*MDQIYVGLV YLKVTGRMEPSWKTLCRILSRRTSPT
5493	13544	C	6319	395	1096	
5494	13545	A	632	323	585	SQHFGRTKPEDSLRPGI*DQTGQPRETLF LQNLKKKLAGHGGACLQSLLGLRLRWE DRLISGV*GCSDT*LYHCTPAWVTEQDP VSE
5495	13546	A	6320	304	475	PRQTGSGVDLRQTPTDLQLRVA*LLEGKI TNRKGHLHQNPICSTSPSSKTGKDQIYV
5496	13547	A	6321	224	1767	HCLSNVSAGLHPFTSYCLLHEKKFKA LSLGECCDGDGADGGDGSMAKSGP LAAGLLEFAGGPLQTLFAWVSAAEAAE QPILLNSKCCCLIVPLEASSWRGTRPCEVI VSEAGASIYSVSPEANKEMPGLDPNLR AVSIARRVQDPLAELVKIEPKHIGVGM QHDVSQTLKATLDSVVEECVSFVGVDI NICSEVLLRHIAGLNANRAKNIEWREKN GPFINREQKKVKGLGPKSFQCCWAFI RNQPGLYPNVLQSANLKLQAKFQGVAV TSSADVEVTNEKQGKKKSKTAVNVLLK PNPLDQTCIHPESYDIAMRFLSSIGGTLYE VGKPEMQQKINSFLEKEGMEKIAERLQT TVHTLQVHHRWVFSQPEGDFDRTDF**T WIFKEEGIVCLEDLQIGTVLTGKVENATL FGIFVDIGVGKSLPIRNVTEAKLSKTKK RRSLGLGPGERVEVQVLNIDIPRSRITLD LIQGVMSIPRRPDADFISFPQIDKDKSVV CKL

5497	13548	A	6322	2	64	AFRFSVVRIHERSHTGEKPYECKQCGK AFISSSHFRLHERTHMGEKV*EYKQHSE AFGCSSSF*IHKRVTYTGQKLCEYKHCSK ALD*SSFF*ARKNSHW*ETL
5498	13549	A	6323	168	499	VCSSAKQ*QTCFSLVSPM*NLKEFLNN IKFPQQDGTSQLVSGENVDRKIVGVS GVGSYLGSKIFRLGAVAHTCNPSLGGGR GGQITRSGDGDHPGQQGETPSLLKI
5499	13550	A	6324	165	548	SPSQHSLVPSTPLPGSVLWGIGGLPCAA EGSRSQQGDGWLRRSSVDLAVGDGEGK EVPRPLALGCDLARDGSRTLSPGPCPKP LGQRWES*ELRKVPGLAPDLSVESAPRS WEAPECQQMLQLSP
5500	13551	A	6325	18	225	TLGLK*SSHLSLSSWDYRCMPPHLAN* NFCLFVF*RWGLAVLPRLLNSWPSAILP PWPLKVLELQV
5501	13552	A	6326	724	900	MTSFSDKFQSFQNRGSTIVTIAHFWSRKY LSDKECS*NACVVFIHSI*KWANTKTFFP D
5502	13553	A	6327	15	185	VPFENPWVDPVRVRPRVFFSTGTFRCCA H*IS*LLQSGSSQASLCRYNEESQKHAAL SLSKEHNPTQYEERMRIQKAGGNVR*PR QACVVIMRRVKNMOP
5503	13554	A	6328	199	544	PARLGLEEGRYLITGRGWVWVLTTPVIPA FWEAEVARSQGQKIETILANMVKPHLY* KYKKKLAGGGGGYL*S*LLGRLRQENG VNLGGGACSEPRSCHCTPAWATEQDSV SKNKK
5504	13555	A	6329	837	1096	
5505	13556	A	633	1	231	
5506	13557	A	6330	454	526	
5507	13558	A	6331	258	488	NTVSTRKYKKLARRSGGCL*SOLLGRLR QENDVNPGGGACSEPRSRHCTPAWATE RDSVSKKKKKKKCFQSSILLK
5508	13559	A	6332	3001	3080	
5509	13560	A	6333	6181	6292	
5510	13561	A	6334	3	222	ASVTACRLNCQGCSPCQPFCLPFLAAPL P*VNPQLETPFP*ARTQRIPLPSG*PGTPS PKPTNHIPLTDPL
5511	13562	A	6335	2	227	FFETESRSLTQAGMQWPNLGSLOPPRPG FKQFSCSLPSRWDHRHMPGLANFCIFS RDGVSPY*SGWS*TPDLR
5512	13563	A	6336	2	218	TWRLAVAQAGVQWRNLSSLQPLPPGFK *SSCLSLPSSWEYRLLPPRANFYIFSRDR VSPCWPGWSQTPDLR
5513	13564	A	6337	31	165	GSHTVTQAGMQ*SNHGSLQLYLPSLRRF SYLNLPSWDQRSNKEG
5514	13565	A	6338	122	376	KMGPLSSSSLPEAECDPRAATLGMNKM LHSHWVSSIAVPDPGMG*KAAAGPDFET GQAEARLSPPSLQESSVWPGDFPHQIC
5515	13566	A	6339	3	268	GRVAVRKEKGSFWLVVFNWLSLNLWPL PPLPGELA*TFLKSLRRPAPAPRPPPPQT PSPTPRSLAVSSEGWRLLSMTLESDDL DL
5516	13567	A	634	1	686	ARAGLGFSCGFGVPDSGIGGAMSSFEGQ MAEYPTISIDRFDRNLRARAYFLSHCH KDHMKGLRAPTLKRRLECSLKVLY*SP VTKEVLLTSPKYRFWKRIISIEIETPTQIS LVDEASGEKEEIVTLLPAGHCPGSMVF LFQGNNGTVLYTGDFRLAQGEARMEL LHSGGRVKDIQSVYLDTTFCDFRYQIPS REECLSGVLELVPKLDHSEVPCCVAEL Q
5517	13568	A	6340	2	218	IYTHIH*IDPMFSL*GHMEGEVWGLATHP YLPICATVSDDKTLRIWDLSPSHCM LAV RKLKKGKRLSHLNV

5518	13569	A	6341	1	5748	MPLKLQNCALHPERVLVATGQVGKEP YICIWDSYTVQTISVLKDVHTHGIACLA DLGQCSVKAVIDNARRNECGYIPVKLY LQKHSFSLICLPFYSFLDLDINQRLVSVG LDSKNAV CVWDWKRGKMLSMAPGHTD RFWSLCGNALTPKRGVFGKTGDLQTLCL LACARDELTYSGALNGDIYVWKGINLIR TIQGAHAAGIFSMNACEEGFATGGRDGC IRLWDLTFKPITVIDLRETDQGYKGLSVR SV
5519	13570	A	6342	2	252	PPE*LGPNGCQGPPTPLPKFW*ILSKKNG GSPPIIGPGPILKPP*PLRWIPPCPLSPKCL RLPGHKPSAPQPEN
5520	13571	A	6343	289	395	SRICPHRDTRKEYNSYTIAFLINLLKFAEL DCIVYFRLNDN*M*IFRCSTIFYNPALAF HILRKPPSTFF*GRFLLSEMPCLMLLLII* PNYLIQIKRSI
5521	13572	A	6344	262	389	PQVTFSLASRYATILL*FF*PCLVFYSLPN QFYVQGKLANA
5522	13573	A	6345	1	103	QSFTYCFESF*NLSVFLYCLYRITN*VYY LYVE
5523	13574	A	6346	7	156	LFSFHVSGTMAHTCNPSTLTG*GRIT*GL EFKTSLGNTVRSHRYRKKKIA
5524	13575	A	6347	94	469	NCTYVIK VYNLIRHMYTPITAIKIISTRFKI YWYSLIFS*ICIHIFETRSLTPIAQAGVWC HDHSSLQPLPPGLR*SSYLSLSSWDYRH TPPCSANLCVCVCRDRRVSFCYPGWLLN ILNVCII
5525	13576	A	6348	1	226	FFEMESHVSTQAGVQWPDGLSLQPLPPG FK*FFCLSFSSWDYRHTPPHAYFCIFSR NGVSPCWPGWPRTPDPR
5526	13577	A	6349	3	308	KDEKGEEDGKEDKNGNEKGEDAKEND DGKEKGDKKEGKDVKEDEKEREDG KEDEGGNEEEAGKEKEDLKEEEEGKEED EIKEDDGKKEEPSIV*NCPM
5527	13578	A	635	52	264	GLLVGVGAAAVMPGIVELPTLEELKVDE VNISSAALKDACHDYGDEWDKPNVDIM L**LEQLHPSMGQAL
5528	13579	A	6350	1	239	MDGGTEKPFACPV*CTKRYKNVNGIK YHAKNGHRTQIRVRKPKCRCGKSYKT AQGLRHHTINFHPPVSAEIRKMQQ
5529	13580	A	6351	219	688	RRMHAYVSLDPLERPPFFFFLFFFFFFF LRRSFALVAQAGVHWRDLGSPQPPPPRF K*FSCLSLPSSWNYRHAPPRPANFVFLVE TGLQLPTSGDLPASASQSVGITGVSHCA WPGNWLLKETRCGSSVGRQITGPITPDA WVDPGIPDRYLQA
5530	13581	A	6352	3251	3700	KWPYWLKEESSKLLHHQETS*HSNLGN* ASGLRTLPRAEQKE*GMQTSGR*TR* KEALFSITTDQRRPAVGSSSLPAGHLCS QRRRAFTDLRGEDVLADWSMGYGWP RRGPRIPTLVGRGAHSMATTTTDPHRVL PAYHQCSPCI
5531	13582	A	6353	3	347	DAWEQTQDTELVETRPAGDGTQKWAA VVVPSGEEQRYTCHVQHEGLPQLLRW EQSPQPTIPVIVAGLVVLGAVVTGAVV AAVMWRKKSSDRNRGSYSQAAV*DSFL VWD
5532	13583	A	6354	3	174	

5533	13584	B	6355	10	720	MAPRTLVL LLSGALALTQTWAGSQSMR YFSTSVSRPGRGEPRFIAVGYVDDTQFV RFDSDAASQRM EPRAPWIEQEGPEYWD GETRKVKAHSQTDRENLRALRYYNQSE AGSHTLQMMFGCDV GSDGRFLRGYHQ YAYDGKDYIALKEDLRSWTAADMAAQI TKRKWEAAHVAEQQRAYLEGTCVDGL RRYLENGKETLQRTDPPKTHMTHHPISD HEATLRCWALGFYPCGDHT*
5534	13585	A	6356	3	223	
5535	13586	A	6357	1	179	RSQVIRHQRIPTGQKSYKCHKC/GQGFSL RSLLAEHQKIH F*DN*CTGNEYSKPSSIN CH
5536	13587	A	6358	38	294	LHLMQNRRLHTGDKLHKYDDC/GKAFT SHSHLRHQRIHTGQKSYKCHQCGKVFS LRSLLA EYQKIYF*DNSSECNEYSKPSSIN
5537	13588	A	6359	2	244	
5538	13589	A	636	1	380	KHSVCGRARASCSSFASVFLISKMVRE QYTTATEGICIERPENQYVYKIGIYGWRK RCLYLVLG LLLMILVVNITLTIWILNVTW VSSTSTAPHRV*H*NSLCAETQLQLRLPK RGRHVNFEPY
5539	13590	A	6360	339	1079	ILSLPLLLAGGTDIISCFMGHNFSLPVYK GEIQARNLGMAVEAWNEE*KAGWGESG ELACTKPIPCQPTHFWNDENGK YRKA YFSKFPSIWAHGDY*RINPKTGGIVMLGR SDGTLNPNGVRFSGSEIYNIVESFQEVED SLCVPQYNYREERVILFLKMASGHAFQ PDLVKRIRDAJRMGLSARHVPSLILETKG IPYTLNGKKVEVAVKQIAGKAVEQGGA FSNPETLDLYRDIPELQGF
5540	13591	A	6361	1	1047	MVSISWPRDLPASASQSAGITGLIGALVL SVGIYAEVER/HEI*NP*KCLPGSSHHHP PGRRHVHGLLHWCAGVPP*QPPELLASL RLSRGYGLVLSWLEPRYEKMISGMYLG EIVRNILIDFTKKGFLFRGQISETLKTGRIF ETKFLSQIESDRLALLQVRAILQQLGLNS TCDD SILVKTVCGVVSRRAQLCGAGM AAVVDKIRENRGLDRLNVTVGVDGTLY KLHPHF SRIMHQT VKELSPKCNVSFLLSE DGSGKGAALITAVGVRLRTEASS
5541	13592	A	6362	2	55	FFLRRSFTLVAQAGVQWRDLGSLQPPPL RFR*FSCLSLPSSWDYRCLPPLANFLHF QQRRSFTILARLLVSNS*PRDLPASASQS AGITGMSHHACPV I*FFFETEFHSCCPGW SAVA
5542	13593	A	6363	167	293	VVKLLGILLNQMKTKMNF GDFLTVMT QKMSEKDTKEEILKSSQFH HHQRA*KLF DDDET GKGISGFL
5543	13594	A	6364	3	226	FLR*SLAVNQAGVQGRHLRSLQLP PRF KLFSLLYLPSSWDYSHAPLPANFCIFSR NDVSPCWPGRSQTPDLK
5544	13595	A	6365	1	648	
5545	13596	A	6366	26	612	VGAGGRGWRF AA AVRR AAGGGLRPGP APGPRAGGGGPRGAHLALLRRAGALRA GKEYGKADARWVYFDPTTVSVEILAVAL DVSLALFLIYAIVKEKYRHF LQITLCVC ELYGCWMTFLPEWAHPEAPNLQQPATG WLYWLGFTLFFF*RCVGFLIPRNWLLWA VHGPRTSRKWHQGNQFQWKEVFSGTF QNP
5546	13597	A	6367	3	292	TPWLRDFHDPIVEVEVSVPGEPLLF SAP GLPEPRAGHSVPSGLSVVAFPSFSSDNVP GSLEHLLVLFPGGDVSLRPLCLPI*ETF MIPLSRLRCPCSRVS PFSQHQACLSLGL VILSPVASVWLLFHRFLLTMSQVPWSIFL FSISPGATCPSCALCAFLSRSEELRSHLCH R

5547	13598	A	6368	237	1202	
5548	13599	A	6369	2	58	PRVRCFIYTGKAPNLDKMADDLLAAAD KVR*EGSKPRQNG
5549	13600	A	637	23	360	LCQSQATLLSIFSQEYQKHIKRTTHAKHHT SEAIESYYQRYLNGVVKNGAAPVLLDLA NEVDYAPSLMARLILERFLQEHEETSPFK GIINMMLRYPSQIPDGALAY*VYHGK
5550	13601	A	6370	1	1136	MSSGPVAESWCYTQVVHFLFNCFLFFYQ QIKVVKFSYMWITNNFSFCREEMGEVIK SSTFSSGANDKLLWCLRVNPKGLDEESK DYLSTLYLLLVSCKPSEVRKFKFSILNAK GEETKAMESQRIAYRFVQGDWGFKKFI RRDFLLDEANGLLPDDKLTLCFCEVSVVQ DSVNISGQNTMNMVKVPECRLADELGG LSENSRFTDCCLCVAGQEFQAHKAILAA RSPVFSAMFEHEMEESKKNRVEINDVEP EVFKEMMCFIYTGKAPNLDKMAANDLL AADKYALERLKMVEDALCSNLSVEN AAEILILADLHSADQLKTQAVDFINYHAS DVLETSGWKSMMVSHPHLVDEAYRSLA SAQCPFLGPPRKRLKQS
5551	13602	A	6371	21	358	GCRHSASCAAPRALGPAPARQR*PKAGR VFPERTS*T*G*PAPGRRHPGRIGRRR RSGCSRVRSSVRDC/PSSRSKASNPLSL SSSTGCDGARPPCSV*RWSRFPGARR
5552	13603	A	6372	1	1458	SLPRNLPVTIISQDFGDASPRTNGQEADD SSTSEESPEDSKYFLPYHPPQRRMNLKGI QLQRAKSPISLKRTSDFQAKGHEEETD ASPSSCGSLPITNSFTKMPPSRSSSIMSITA EPPGNDIVRRYKEDAPHRSTVEEDNDS GGFDALDLDELAAGETVAQSPPGVPCQP PLFQGSPLCQLRLPTDETKDEWSSLMG KHQRYQVLKRDDSHERYSGPSSIHSSSS SHQSEGLDAYDLEQVNLFRKFSLERCR NRGPQRKGLAKAMQHGRGKEVGPRYP AVPIHDTVEPDPSGLRSPLWGTGCAQGP RCSTRR*MATASPPSSPCWGATREGASC TRSSLALWPRKPASVRATSCCC*KAASE ARGRVSRWTHAPKRKPTGPSRGAAAPS RCTKGQPRSPAENPWACRI*CGQHLQSP ELRSSTALQVWNSRERKFIPAGVPEAGE GHGGRPDHIGGLVLHPAEPEHLQPAGRL HHVPEV
5553	13604	A	6373	103	226	CCFEILKLMKILISEMHLMLFFL*QLRKS A*IPYVPELFLS
5554	13605	A	6374	112	303	
5555	13606	A	6375	3	109	AWKFFFYFILLFFFLEKHHFYVQ*NISL A*KKKK
5556	13607	A	6376	22	175	THDHVSUYFFFLGLKSTEIQCIDIQMIFL FI*VENHLPVSIYILKYFLWIL
5557	13608	A	6377	1596	1878	TMSDTTFKALR*QLPVTRTKIDWNKILSY KIGKEMQNA
5558	13609	A	6378	394	626	SDSVNPQLRVFKILN*SLGILKTHIQIKLF FFFFSALTALGTLLVCVSIYLYGLPRQD TTSIQQGETASKERVIGV
5559	13610	A	6379	2	101	KTLVPLILPIITLANPCKKD*YPYVVKISI AC
5560	13611	A	638	1	77	
5561	13612	A	6380	1	297	SRFKRFFCLSLPSSWDYRHAPTHALANF VFLIETGFLHVGQAGLKLLT*GDLPALAS QSAGITGGNHCTRQVQCFFRCWGYTRES GQKLDPARVMFENK
5562	13613	A	6381	1	394	TGTHFHFYLLVLLFLEMGPQSITQADV QGHNHSSLQPQTPGLKQSSRLS*NSWD YRHTPPHPANFFRIL*RQGSYHVAQG*SQ TPGLKQFSRLGFPPKRWGYRHESPHMAR DRYSYCPHPDEETGDPER

5563	13614	A	6382	3	160	QL*WSHLLKMLQRYSSCNV**KRRGLIR TYGLDMCSQSLCQYAKDIGFIKLD
5564	13615	A	6383	1	1240	
5565	13616	A	6384	3	3129	KLGSMEPAPARSPRPQQDPARPQEPTMP PPETPSEGRQSPSPSPTERAPASEEEFQF LRCQQCQAEAKCPKLLPCLHTLCSGCLE ASGMQCPICQAPWPLGADTPALDNVFFE SLQRRLSVYRQIVDAQAVCTRCKESADF WCFECEQLLCAKCFEAHQWFLKHEARP LAELRNQSVREFLDGTRKTNNIFCSNP HRTPTLTSIYCRGCSKPLCCSCALLDSSH SELKCDISAEIQQRQEELDAMTQALQEQ D
5566	13617	A	6385	2	416	ACCLLYRGDMVPKDVNAIAIVTIKTRRI QFVD*CPTGFMDGINYPSTVVPVENLD KVQRAVCMLSNNTAIAEAWARLDHKFD LMYAKRAVHWYMGAEAMEEGEFS EDMAALDKDYEEVDADSVQR*GDEGQ EY
5567	13618	B	6386	95	412	TNRSIQFGDWCPGFKVGINYQPPTAVP AGDLANVQRAVCMLSNNTAIAEAWARL DHKFDLMYAKRAVHWYVGEEMEEGD FSKAREDMAALEKDYEEVCVDSVE*
5568	13619	A	6387	2	614	
5569	13620	A	6388	151	1605	RGKTLRGLWRFGKIPTHSHRENRECISIH VGQAGVQIGNACWELCYLEHGIQPDGQ MPSDKTIGGGDDSFNTFFSETGAGKHVP RAVFDLEPTVIDEVRTGTyrQLFHPEQ LITGKEDAANNYARGHYTIGKEIIDLVLD RIRKLADQCTRLQGFLVFHSGGGGTSG FTSLLMERLSVDYGGKSKLEFSIYPAPQV STAVVEPYNSILTHTTLEHSDCAFMVD NEAIYDICRRNDIERPTYTNLNRIGQIV SSITASLRFDGALNVDLTFQTNLVPYPR IHFPLATYAPVISAEEKVAYHDQLSVAEIT NACFEPANQMVKCDPRHGKMACCLL YRGDVPKPECHMLAILPPSKTKRTYPCF VDWVRPSGFHRCGISTIQPPTLLVPGGD TGARYQRSCVHC*ANTTAIAEAWARLD HKFDLMYAKRAVHWYVGEEMEEGE FSEAREDMAALEKDYEEVGVD\SVEGEG EEEGEEY
5570	13621	A	6389	1	251	CLKEISFLNGSLTPGAAVKSWLTATSACS FKGFSCSLSSSWNYRCAPPRPTNFCIFS KDRVSLFLLFSLFLPLLARLVNYPQV IHLPTWPKVLGL*AAVKSWLTATSACSF KGFSCSLSSSWNYRCAPPRPTNFCIFSK DRVSLFLLFSLFLPLLARLVNYP
5571	13622	A	639	34	421	
5572	13623	A	6390	3	445	RLFFFFVFLVEMGFCHVGQAGLKLVT CDPPTSASQSAGIAGVSHRA*PNTSLK*K LTDSKSPGICFFVCFEIES
5573	13624	A	6391	2	176	CKFAHGNAELHEWEERRDALGMKLNK ARKDHLIGPNDNDFGKYRFLFKDLN*YA GFYV
5574	13625	A	6392	186	374	
5575	13626	A	6393	872	1122	LRPWKPLCSSVERLWLPVELLP VLPQPSAQYGERRTFGLTCQGGPGTRAG PSMGCTGYT*RVISQVASGPFHHWPL
5576	13627	A	6394	3	415	ERLWLPVELLP RRTFGLTCQGGPGTRAGPSMGCTGYT*RVISQVASG VSISQVASGPSPLASRMVQRGWLGPVFR LLPAAALGDMCAHLASSPCSPLLTVPR ASQVPPKELDPISPCSLRPRKVS

5577	13628	A	6395	3	349	VSVVEFLCSKRFAQWSHLAQHQLLHTG EKFPFCELCGRCFRQRWSLAVHKCSFKA PNCSPRSAJGGSSQRGNAH*KGKDCLRSF HFMEGPRKGKEEPQVIQGRVTRTKPGSPA AQ
5578	13629	A	6396	2	352	EGAAPSSGGPLRDFWGFPRNTNKPSCGT G*SLQRIWCMASLAPPGPAPRGQAPHTH RPLGRPSRGAQVQPAAGQATSKQSP GPGFWSQLPQDLTASVSPSVNGASKAC LECKS
5579	13630	A	6397	2	361	GGEDPPALCRKPTAQQTQTKKHSQTAA VRSRERHKEVRAGHSLSALDSPPSLLPGI LSPVHQCDVTRVDPISLLTALLWLPSAP K*RSEPHKPGVGDVWSAPPTSGEDLILL ATSAH
5580	13631	A	6398	11	967	GSWSGLGARPPGGWNYTGSKKLSPGGE AL*MKRSKELITKNHSQEETSILRCWKCR KCIASSGCFMEYLENQVIKDKDDSDVAQ NICHVWHMNVEALPEWISLIQKAQWT VGKLNCPFCGARLGGFNFVSTPKCSCGQ LAAVHLSKSRDYQPTQAGRLMRPSVK YLSHPIVQSGCDKEALLTGGGSENRRNR LLNMARNNDPGRLEALCLEVRPTYFE MKNEKLLSKASEPKYQLFVPLVTGRC ATRAFHRKSHSLDLNISEKLTLLPTLYEI HSKTTAYSRLNETQPIDLGLPLQSSKNS YSFQNPSSFGS
5581	13632	A	6399	105	465	SRAYCSLTDFPGLKQSSHLSPQVAGPT GACYHAWPIF*ILAQMRSHYVARAGLEL LSSRDPPASASQSAGVTGISHHAWPVLL LYLAGTQSPEHFIYDGLDNVSSCLHANF SSLSYST
5582	13633	A	64	647	885	TGNLQNGRKFSQPTHLTGK*YPESTMNS NKFRKKQTTPSKSSSPQRRTHRQQRPW GSSQPLPAHSASPGRGSCSQHHF
5583	13634	A	640	3	345	DAWA WPLNRGFFRMMMDIGAAGVMQ GGDSVELLDIPILKLPDGS DIPILLGRL GFHPLKNTVCIYGHLDVQPALEDGWD SEPFTLVERDGT LHGRGSTDD*VPLAGW INA
5584	13635	A	6400	1	462	HKSDGSTVSVPMMAQTNKFNYTEFTTP DGHYYDILELPYHGDLSMFIAAPYEKE VPLSALTNLSAQLISHWKGNMTRLPRLL VLPKFSLETEVDLRKPLENLGMTDMFRQ FQADFTSLSDQEPLHVAQALQVKIEVN ESGTVASSSTAVI
5585	13636	A	6401	3	569	NQASLSFLHRLPYSGHLIRGTPGRGWGK VGAASQRGPRLEQPLAAICRFSLETEVDL RKPLENLGMTDMFRQFQADFTSLSDQEP LHGPQAL*KVKIEVNESGTVASSSTGESG SGEAPRVSPSPFRITGPQTRKGPRSPGLT EQLCLCSAITHSPVVSQPGKRAWDHGTL FPRLMAPKFPDCEKAS
5586	13637	A	6402	3	194	FFFFTCTQMFITALFITAPNWKQPRCPSIG Q*TNLFNEAVLSREESIKTKTRDRCYHM DRISK
5587	13638	A	6403	2	223	EMESCSITQAGVQW*DLSSLQPPPPGFQR VSCLSPSSWDYRYLPPRLANFCIFSRDG VSPC*PGWSRTPDLR
5588	13639	A	6404	2	247	RLFFFF/CFFEMESHSVTQAVVQWRDLG SLRPPPPGFKQFSLSSWDYRHTPPH PANFCIFSRDGVSPCWPG*SRTPDRL
5589	13640	C	6405	65	211	MSPNWRWGPPCLATPQGVTPSDTQPCQ ALGLGPHPRNVQPPIISGTG*
5590	13641	A	6406	1	112	GGRGCNQS*SRHCTPAWVTKQGPISDIDI LIRPLTI
5591	13642	A	6407	259	380	GCVQQGVNVQHCAGQQHL*ENGGPGSS DCGWHRGHPLCRL

5592	13643	C	6408	5	160	MGFEGGPKILNWKFKKVXQSXSCLXKG QXESIFLNTXKVIRAGDTXKSVLG*
5593	13644	A	6409	117	207	KKTMFRQKLFYKRKQLQKGPRP*GAGF KV
5594	13645	A	641	1	1254	
5595	13646	C	6410	155	394	MLKWIYRIFVNLFLVFVRFFNCSFLCAEC ISLPGQECGGAEVSSSRTFPQHLLSLYL MXXXXXXXXFLQALGLCYPIQ*
5596	13647	A	6411	68	547	LDNRCERCLTEGGWLTSHAPRGKGTW GQKKEPASWGPWGCQW*RGAWPTGC KQGRGSPSPQPLGSGGRHEPGQAKATK ASPSQGEEDKGRPRQOGPSWRKSSPRPI SDPPTPGGDKGPSSTSLRL*TRLEPDLVS LGISAGPTRWTLASVQLQ
5597	13648	A	6412	11	321	KNFYLFF*DGVSVAQAVQWRDLGSPQ PPPPGLKLLSCLSLPSSWDYGHVPTMPG* FCTFSRDGVSPCWSSWSRNSRISDASACL GLPKCWEFTRRDNSAPRS
5598	13649	A	6413	17	237	YVAQAGLNLASSQSSCLSLPKHWDYE CEPLCLAFFFL*RQGLAMLPRILPPIKSI SIRWRNGQKKMHQVL
5599	13650	A	6414	806	1680	AMGIHCITTTTRTERSMPTTSAAVLPGPM RQWQLQLPPCIITQSRPCPSCHKRIQPW PVTSPPLSIPTIDTCCRPQELLQQLLQ QPLLLLQLPLHITGGIGAPCVLQPSQ LLERATVTGMRVSCPQLQPRGILCTTW PGMSGSSMPIGRVTATNAKARCRHAAD TALPAASASCVGTTTAACWAAAWASAT TGPSACCFMPPASCSTSLCCWALHCRP CCEPTRPSTWLPSSCFPGSC/CRDHHCL LGRCVGFGNYPFLCLL/SSCRR/PSCTS LCCWALHCRPCCEPTRPSTWLPSSCFPGS CCSQPHCPTTLWSTLPLSHGRLWLQSQ TLSSPWALWKS RVSGSLH
5600	13651	B	6415	61	516	MTTLKKNLADDDAVSCLVLGTENKELL VLDPEAFTILAKMSLPVPVFLEVSGQFD VEFRLAAACRNGNIYILRRDSKHPKYCIE LSAQPVGILRVHKVLVVGSTQDSLHGFT HKGKKLWTVQMPAAILTMNLLEQHSRG LQAVMAGLANGE*
5601	13652	A	6416	360	861	RCGSFLQLLLPMPKPADTALPAASASCV GTTTAACWAAAWASATTGPSCACCFMP PASCSTSLCCWALHCRPCCEPTRPSTWL PSSCFPGSCCSQAELWHSPLWPS*RTRA WRVRCCAGLGCSSMGCCCCGARPHGSG LGASTPMTWVPATTCRQPWAPARRLGP
5602	13653	A	6417	2	263	NPRDGPTTAACWAAAWASATTGPSCAC CFMPPASCSTSLCCWALHCRPCCEPTRPS TWLPSSCFPGSCCSQP*SPLSSCKPLKPPV F
5603	13654	A	6418	18	211	NEPRASTLTSSKAGQRQAPWTLFPNSYP L*EYPPANPFQGGPHDCRAQTKDMGAQ APRVPEAGP
5604	13655	A	6419	2	548	NGFRGAHSQCPPACVLPGQAMSTGGRQ LPHPCMNPPSPGDSMDAVIKGAAVDLG GTWKGAKPLGLWHCGG*PIENRAGAGE T*SLHI*TPVRSPGFLGTSPMGSPALKN HGSCARPLLSPLPYPPKERPLPPWHLQS EDLPPPRGPEALMPQELGLERC*YPLPQV PRFRGTGAGLVQA
5605	13656	B	642	52	554	MGKEKTHINIVVIGHVDSGKSTTTGHLIY KCGGIDKRTIEKFEKEAAEMGKGSFKYA WVLDKLKAERERGITIDISLWKFETSKY YVTIIDAPGHRDFIKNMILNHPGQISAGY APVLDCHTAHACKFAELKEIDRRSGK KLEDGPKFLKSGDAAIVDMVPGKPI*

5606	13657	A	6420	368	623	LVCVFFFF*ERESCSVTQAGVQWCDLG SLQPPPPRSKQFSCLVLPSSWDYRHTPPC LANLCLIFKSRNPKYFIFFPNCYEWD
5607	13658	A	6421	42	179	
5608	13659	C	6422	28	219	MQILLKSKPKGSTKXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXFRCHD*
5609	13660	A	6423	2	161	KNLH*MESYSVAQAGVQWHDLGSVQPL PPGFKRFSCFSLSSWDSRLYFRCHD
5610	13661	A	6424	363	750	REQDPACAWSSS/APNSSWSLHGEAVSH RECLSSPVLPGPDSSKALSSAAAALSMSS GRGGGSLVPFSGPVSGVARWIASCVAGE SCLA*AGTRTRCTAPSEAT*SSTRGLSRG AASLAASVHHGSRMSL
5611	13662	A	6425	890	1879	LWGLVTSSCLSFSRRNFTTEIFQEDLMLS DPLNLLSLVMWLCTLWTSALAALSMSSG RGGGSLVPFSGPVSGVARWIASCVAGES CLA*AGTRTRCTAPSEAT*SSTRGLSRGA ASLAASVHPGSRMSL*VAGKPKGPGPTE AAPSCRSSSITTCTPLTLSHSSSTADRAL KASPGLSLRGPGSSGELCARLSPSSSGM DTFPCRLSPTSSWRRFNNSLLALARPRA ASAKPTALSTRW*ITCRSCSEL*TAKPCP VTVMGVLGGGFPWPVLPPLVSLQA QQQHLASLPFPFSMRMVRGAQAPSCR RLPRARGETPRLPSGSR
5612	13663	A	6426	8	363	AEVQWRNLSSLQPPPPGFK*FLCLSLPRS *DYRLAPPCSANFCMVKTEFHVGVQVG LELLASSDPPPALASASQSAGITGVSHHA WPRASLLSLVIALKQASFFCSHAKQVS QHFTN
5613	13664	C	6427	87	287	MIFFSFCVNTWCHSPFCATVTEYHSLIXX XXXXXXXXXXXXXXXXXXXXXXXXXWGLF CCIITQRKVEG*
5614	13665	C	6428	11	328	MHMYGXXXXXXXXXXXXXXXXXXXXXRI SEHILCIFRSNYRMIFFSFCVNTWCHSPFC ATVTEYPRLXXXXXXXXXXXXXXXXXXXXX XXXXXXWGLFCCIITQRKVEG*
5615	13666	C	6429	76	276	MIFFSFCVNTWCHSPFCATVTEYHRLIXX XXXXXXXXXXXXXXXXXXXXXXXXXWGLF CCIITQRKVEG*
5616	13667	A	643	36	695	
5617	13668	C	6430	7	324	MHMYGXXXXXXXXXXXXXXXXXXXXXRI SEHILCIFRSNYRMIFFSFCVNTWCHSPFC APVTEYHRLXXXXXXXXXXXXXXXXXXXXX XXXXXXWGLFCCIITQRKVEG*
5618	13669	A	6431	1	336	FFFFFRQSLVAQAGVQWCDLCSL*SPP PTLSTPLASASQVAGTTGAHH*TGIIFFVF VETVFCHVAQAGLELLGSSDPPASASQS AGITATVPSLL*LFIKQKQKQNRITY
5619	13670	A	6432	3	1105	
5620	13671	B	6433	52	936	MAYLKIQKYEEAEKDCTQAILLDGSYSK AFARRGTARTFLGKLNEAKQDFETVLLL EPGNKQAVTELSKIKKELIEKGHWDDVF LDSTQRQNVVKPIDNPPHPGSTKPLKKVI IETGNLIQTNDVPDSTTAAAPENNPINL ANVIAATGTTSSKNSSQDDLFTSDTPR AKVLKIEEVSDTSSLQPQASLKQDVCQS YSEKMPIEIEQKPAQFATTVLPPIPANSFQ LESDFRQLKSSPDMLYQYLKWLSSHQ DNTRAQRLEKAGWQLAFLRYYYHLLDV QKITVCMWQKAF*
5621	13672	A	6434	1	309	LPPIPADSFQLESDFRQLKRSPDMLYHD* KQIEPSLYPKLFQKNLDPDVFNQIVKILH DFYH*GKKSPLLIFEILQRLSELKRFDMA VMFMSETEKKIARGII

5622	13673	A	6435	1	936	
5623	13674	A	6436	1	1023	
5624	13675	A	6437	602	744	TPASLKIPVE**NTLLAKMVSIS*PRDLPA SASQSAGITGVSHRARC
5625	13676	A	6438	1447	1931	RKVFKWLSAPLDVSNCPSLCKD*W*RV* RFMPETFPAR*GAENPTLPCCHYSIN/HFT VFSFL/IFFFWR*SLTLVPQAGVQWRDL GSLQPLPPGFKRFSCLSLPSSWDYRCLPP CLANFLYF**RQGFTVLARMVSIS*PHDL PASASQSAVFSYLIFFLPY
5626	13677	A	6439	1	74	FWRPVRQSEYKQVNKGQDSTFPI*CLQ TNTDYRFRVCA*RRCLDTSQELSGAFSPS AGFVLQRSEVMLTGDMSGSLHDSKMNS MMPTEQIAAHALGFATLAILFGFI*QSE YKQVNKGQDSTFPI
5627	13678	A	644	62	1548	PLKAKMGKEKTHNIVVIGHVD\TGKST TT\GH\LIYKCGGNDKRTIEKFEKEAAEM GKGSFKYA*VLDKLKAERERGITNDISL WKFEDQQVLMWTIIDCPRDTETFIQKHD LQGTSQGLAWFGGPPFWGGSPLIVCCW CLVEFESWYSSKHWRPREHALLGFTYT GVWKQTKLFGVNKNWIST*GHPTAQKK ILKEIVKGKSALTLRKIGYNPDTSILCPIS GLNGDHMPGAQMPNLPWFKEWKVTRK DGNASGTTLEALDCILPPTRPTDKPLGL PLQDVYKIGGIGTVPVGRVETGVLPKPGM VVTFGPVNVTTEVKSVMHHEALGEAL PGDNVGFNVKNVSVKDVRGRNVAGDS KNDPPMEAAGFPAQVILNHPGQISAGY APVLDCHTAHLACKFAELKEKIDRRSGK KLEDGPKFLKSGDAAIVDMVPGKPMCV ESFSDYPLGCFVRDMRQTVAVGVKA VDKKAAGAGKVTKSAQKAQKAK
5628	13679	A	6440	2	174	FFFFFLENLF*PSNFGSYKPVHCCVFF CCCCFFFLAVFFVCFCCFFSFSFLFF
5629	13680	A	6441	1	271	PPRFFPEFFYSGPPKPPFFKTPVFLGVKPG VSSPPYQKKPTNFGPKMGAL*RIPLFET PIWVFPIKGFHKKKPPVLN*PPTRKPPD KI
5630	13681	A	6442	3	128	FFNKKPPPFGRGWPFVLPATLRF*G*KIFF PPPPPEVRFP
5631	13682	A	6443	1	154	LVWS*EASKIPGGAEAAHPPTTF
5632	13683	A	6444	2	230	FFFESGSRSVTQAGVQ*HSLGSLQLPPR FK*FSCLSLPSSWDYTHVPTRPANFCIFS GDGVSSCWPGWSRTPNLR
5633	13684	A	6445	70	550	NQVIWESFQAGRHHGHPAPSLAPSASSF LSSFCPSGKAETLESI*SSGKPGVGEGAT SLFPSIS*MFWEGPENGTOEPAGMPIHT PPSCSNPAIHSPGGTGAPGRREEALHCPP *HIPSHPPSRPPWLAPLSLRFPTPMAVN DQDRSHVCFPLGLI
5634	13685	A	6446	77	485	NLVYVSSICFTWTFHFERKKFYVSHIVLY KVASPIMKCLYCHSGHTQVVQYLNGEA ARLQGGLLC*NVIIFICLLSLSLFFSFFG PMLKM*NFVFK*CFYNFIRKPKFVFFVTL DFNSLYIGTSNVITVLNKFH
5635	13686	A	6447	3	349	KVEDPSPVWRNSIFWKVITFKVYFFCLF VFLETESLSVVQAGVQWHSLSLQLPLP GFKQFSCLSLSS*DYRCTPPRPADFCIFG RDGVSPYWSG*S*TPDLMLCPAWLPKVL
5636	13687	A	6448	1	189	FFF*IGPHSVAQAGVRWCDLGSCSLNLP GSSDPPASASQVAGTTGVHYTQLIFKFF IEMRAP
5637	13688	A	6449	2	304	LDTPLGAAPAAFFLPSLNQCLIYNPMPVR PLKAWRLKTGILTEPRVKGEALGAGMM PTGVSTASSPSYPLAPLGPRLPLQDCMH QALS*APLSDALCIAL

5638	13689	A	645	2281	2431	KLFFLK NVLLNFFLPLLPSPVLVCYCCF SFFFLYLCLFFTVVLGSARNK*KLFFLK VLLNFFLPLLPSPVLVCYCCFSFFFLYL LFFTVVLGSARNK
5639	13690	A	6450	21	359	SLLQSPAFFSPAFCGLL*PSVVQSPAFS SLL*PSPAFSSLL*PSLLWPSFSGLL*PSLT FSNLL*SSLLPSTEETPAGQRQELQFPV GGAADAYFPFKCFKLSSECLK
5640	13691	A	6451	2	170	LSLLSS*DYR*APSQLANFSIFL*RWGLA VLPRLVSDSWPQMILLPPVPDVLELKA
5641	13692	A	6452	3	112	
5642	13693	A	6453	4041	4215	
5643	13694	A	6454	3	309	PPPPK*IL*RAPNPPLSSSSFSNPPTWGPGP QPPPSKFSKFARFPFLPPFPFKKEPPSSSL FFPTKEGTVI*KNPPFSGFQSPDSIK*GRV EPPGGTKRG
5644	13695	A	6455	2	439	RTSAREKRDLNRLKKLGDSSKNSDC*SV SSNTDADATQEKNNATSNRKSSVGKK NSKSRTLTRQSMSRIPASSNSTSSKLTHIN NSRVPKKLKPAKPLLSKIKLRNHCKRL EHKNASRKLEMGNLVLKEPKVVLYNKL PHKKR
5645	13696	A	6456	1	146	
5646	13697	A	6457	59	431	PTAMAEEGIAAGGVMDVNTALQEVLT ALIHDLGARGIREAAKALDKYVYQSQYC GFLOPEQNCHPREEGMEFMVLAQKF*M ASVLPET*EKVQAHLCLVLANCDEPMY VKLVEALCAEHQINLIKVDDNKKLGEW VGLL*ILWVLATGTLKPPKRRHGVHGV SAKVLNGIRPTGNLKGAKPIFVCLHPT VMSLCMSSWWRPFVLTNTKST
5647	13698	A	6458	242	431	
5648	13699	A	6459	65	473	PTAMVEEGIAAGGVMDVNTALQEVLT ALIHDLGARGIREAAKALDKRQAHLCLV AFNCDEPMYVKLVEALCAEHQINLIKVD DNKKLGEWVGLCKIDREGKPRKVVGCS CVVVKDYGKESQAKDVIEEYFKCKK
5649	13700	A	646	203	371	HTDYIPNGPRTNEPTAHELIG*H**PSHFR T*VEQYNINADLKS*YQHSMDRMLSG
5650	13701	A	6460	32	485	HLVLAASLLACLASIFLPSVGLGQCDLVGS QKTIPRNEGLPRKQITFLSLLPSCWFP YSPRLAIKTTIPLHQKPAKPKNITLTL FLSV*NWAIGKLFGLSGL*GQEGPPFQR ESCAI*GRKECCAKRPKRILTDRPRWVPH SVYQH
5651	13702	A	6461	3	336	FFFFDIGSCFFA*AGVQWHDHGSLOPP GLK*HDIPTAS*VAGTTGAHHHA*LIF* LSVKMGSSPLVAPGWSMKSWTQANPSL LQPPQSAWDYRCEPPCLVRNIFEYV
5652	13703	A	6462	2	280	VLGIWRVPGSGKMEKRESEKQILPRPIG CIWERGKSPGEAPSALPMPWSNPPPGTC TPSCPTYRCTPLPR*TDAPSRHTLAPRN GETIFA
5653	13704	A	6463	1	171	MWGWKEKIKINTFVYCWWFEKLVQNF WSTTWQHILKF*MSFDALLGIYPKYILT VT
5654	13705	A	6464	21	402	
5655	13706	A	6465	42	266	
5656	13707	A	6466	60	656	RRRLPSVAIMIYRDLISHDEMFSDIYKI REIADGLCLEVEGKMVSRTEGNIDSLIG GNASAEPEGEGETESTVITGVDIVMNH LQETCFTKEAYKKYKIDYMKSIKGLLEE QRPERVKPFMTGAAEQIKHILANFKNY QFFIGENMNPDMVALLDYREDGVTPY MIFFKDGLEMEKCVSTRKWVKINNVKK TF

5657	13708	A	6467	176	552	MRSSKQMKPNFPRCSSITVLSVRGMVLF LTACPRFKMSSRTDFRGNPQVT*GSTI CSIFRLPSILSMRTTK/DQGMFIWQFGM RFHF*SSETHLVTFLLPPGIM*E*FQSLKPE PFSFLLSCYCH
5658	13709	A	6468	98	507	RATEKWKGRKNHELSSWKCFPLKIFFRRS LAMVLCTSKLRPSVLSMRTTKARECLSG SSNA*GFTSSRLRHSLSRFCARNHVGMI PVA*T*ALFLSSAPSLPKMPALPGWLCGL DKPSSFSGDFLEPKGFFALAPP
5659	13710	A	6469	204	401	WHEFTGAENHCKTLPKENF*WCLCKSH PSEPKNAAYNRTLCDLGISKSEVSLGTSF EMWTSQGQE
5660	13711	A	647	12	355	LFSSLSGGMQSLSLGQTGISGLN*LTSM APGNLWHMRNNFLFGSRCWMTRFSAEN IFKSVSFRLLFGVKCHNTDSEPLKNEDLLK NLLTMGVDIDMARKRQPGVFHRMITNE QD
5661	13712	A	6470	249	906	RIHFPRVSGPSQSNPKFAVASRGFFSLSLS SAQPDPLPPLGEALALSLHPVPRRSTET VAGDSSELQLGLRSPQQPLAGLAFLARL FLLFPPP*RCKSKPN*NDRRRSSVDSQIHL VGRESAHLPLAGLRVCVSLPLLARCFGQV LQGVFGLWIPSPGGS/AGVSRRRREERH MGVVVMRVRVEARVSS*ESK/SRALR*S THLGLPKCWDYRREPPCPAH
5662	13713	A	6471	401	659	LIDLRFIYLFYLR*GLRLVP*AGVHWCN LGSLQSLPPGFKRFSCLSLSSWDYRHAP PHPAHFCIFSRDAVSPCWSG*SQTPDLR
5663	13714	A	6472	1271	1538	
5664	13715	A	6473	1	369	ACSSCFHAGLEHVRVRGSGHGVAAAR RSEAPDLFC*PPSLPVPSTPFSPAPAMN QATSDPTHTCPTRLTCPNAAP*AGPTAD TPS*GIPDLPAVVLKTPQHLDLPVCSLCG PPLGPTET
5665	13716	A	6474	3	340	ETRSYSVTQAGAEWHDHRSI*P*PPGLR *SSHFSLSNWDYRCVPPHSANFLVIFVEI VFHHVAQAGLELLGSSDLPT*ASQSTGIT GVNHCPAEKEVLPREKAMQGGGSA
5666	13717	A	6475	21	273	GMNERGNITKEIKKIWEY*LGTSQLD TLD*INSQKDTNYQNQLTKYRKYGLEPI TSDYISNFKRLPKKSPGLDGFTGEFI
5667	13718	A	6476	2	3204	FGEPTSEQTGTAAGKTIAQTAPVSWKP QDSSEQPQEKLCNPKCAMFAAGEIKTPT GEGLLDSPSKTMSIKERLALLKKSPEED WRNRLSRRQEGGKAPASSLHTQEAGRS LIKKRVTESRESQMTIEERKQLITVREEA WKTRGRGAANDSTQFTVAGRMVKKGL ASPTAITPVASAJCGKTRGTPVSKPLEDI EARPDMQLESCLKDRLETFLRRLNNKV GGMHETVLTVTGKSVKEVMKPDDETF AKFY
5668	13719	A	6477	250	5816	
5669	13720	A	6478	553	7399	NFNKKNLSFLGFPRQRKVSSFQKEFSLED KEQLANHERGIDAQLLVALPKVAELRQI FEPKKKEFLEMKRKERIARRLEGIENTQ PILLQSCCTGLVTHRLLEEDTPRYMRASDP ASPHIGRSNEEEETSDSLEKQTRSKYCT ETSGVHGDSPLYGSGTMDTHSLESKAERI ARYKAERRRQLAEKYGLTLDPEADSEYL SRYTKSRKEPDAVEKRGKSDKQEESR DASSLYPGTETMGLRTCAGESKDYALH

5670	13721	A	6479	380	999	AGAKGGGPGGRGMKKTNSLTPLLSAYR LLPVELSKGWGILGFSVCPFAPGLMAKG VSPCDTAVKRDNIH*VGGGVS*KCP*RSS *WSGPVPALTALFLVDNHHEVYLWQGW WPIENKITGSARIRWASDRKSAMETVLQ YCKGEAPSNMPAARNRWGSPSGMRSQE TPFPFCACQPASIHKAQVVDENPIFSPL KPFEDVIKFLD
5671	13722	A	648	1134	1633	PNPTGTLMMLARKWCPDGLQSLPPDVLGS *GEHLLSCLCQERACSSNSRRPRQAWTG SQGSRVINFFFAKVGTC HQGNHQKAP KAPGTPPTPSYPGTSPRQLLWQWVQPRP ALPASSPCSRHQLYLPRQAMSWLLSPAP SVPLDFSGASPVWATLCFHPRLPHR
5672	13723	A	6480	78	200	KKGSPFFPKVGGQGGNLGLLEPLPKLK KFFCFKPPKRGDYSSSSSSSPDSSSSKKK GVSPFWPGGV*TPKEGGL
5673	13724	A	6481	179	384	FNSYYMYVYVYVHICVFLYVCICIYRYI YLCIAVITCLMNEW**FKCKGNDARGYE KKLPSKYEIEKE
5674	13725	A	6482	76	205	RKKPEPEKTCFDNITGNTYPCSTYEHDS D*YYVNRT*LCAER
5675	13726	A	6483	2	774	HSYSHSHGHCSPAGDTEQGYKPVWPV CSLFPDGSHPGV*QPIHEPA/QGRGGLPP WGAA*TPRAWRLA*RPRG*AALPWA*T SPGRPASAPLAHTGSGCPSRPTRAPGSP/ IPIQNIKRYPGEAFVPSRAGPTVGVTRS FHLAPSLPPFPSS*LSPSLPRTTTSCTRAI LTPSS*QKLLYPPSRPVVLLVRRARPPAA APTSEEPERSPWETPHAAPSQHELHET HSVAQKSDLLPAPEAM*PGSVSSRFLLY
5676	13727	A	6484	2	732	GRRRPGPKPPRAPGRDRDRCNF*PCCPP GAKSSAACCCDIRRAARAIPLGNSPCSP LSAP*AP*NPLCRTVMGRSPMTLSLGSRT PTSLPAPFPWSPRFGE*PTHPRARSLGTL WPMPTTP*QAATPWRR*PPATQASTP HSLRGSSSSQPRLAPLRPTSSRACMAGP TTAAGALGPVTLGVLTTPQAWASLRTP GRLLTSLSPRQPLQQRQWQQQQPQLQPQ PRPLWQPCRRHRTRI
5677	13728	A	6485	2	338	CTTAIPTPEEMTRLRSMNRQLQINVDCA LTEVDLLQSRGNFDPKAMNIFYDNI*PG PDVPPKPSKKGPTDSEPKTSSGPCSNIGC LLSCKFFHACSRFQNPPICHQSTLAA
5678	13729	A	6486	84	300	RVGARGKMTALASGQLGPLMCQFGLPA *AVEAANKGDVEAFAKAMQNISKPEQI* GDTKDKTD*KEDLSLD
5679	13730	A	6487	91	668	SRAQVVLHCVLREWAGGRRSPAPPSPW PVLHVPDPQSWQLSSVALGCSPGWSSAL AWLFLQALGMFSAALASGQLGPLMCQF GLPAEAVEAANKGGKVAAPGTPRPEPG AGSIPVPLDLQKWG*GGKGHSPSALDPI ALIPSGARVRHHLVSLTCS\VEAFAKA MQNNAKPEQKEGDTKDKKDEEDMSL D
5680	13731	A	6488	1	414	LQPGPAGAQQVDLA/SVV*PPEIMAPILA NADVQERLLPYLPSGEASLPQTADENQNT LTLAPSSQALGMFSAALASGQVGAPF MCQFGLPAEA\VEA\ANKGDVEAFAKA MQNNAK\PEQKEGDTKDKKDEEDMSL D
5681	13732	A	6489	205	553	LSRPRHHKASTTGAQMQGRTRSMRQEP EKAILTLRGSREPTPRAPQLVPSVPSSWL FLSLHSIAQTPLPHTHSTHTPRSQALPSQ APVPVPQHPPPHPE*ALSPDNLFMILKSP

5682	13733	A	649	1	370	QRLAEMSNAIERKHATKMTYQPTNGTL TSGYVADRRVKHHS GGEEPFQAQKQEP HPGTSRQ*QTRVNLHSLPDPEMHEQTYF RGM YRKLGGWKAGPEGTFYDIPRYVTA YTFAHTRPADIRAM
5683	13734	A	6490	3	347	SFFFVLRRSLAVAQAEVQ*RNLGSLQPPP PEFKRFSCFSLPSGWDYRRPPRPANFLY F**RGVSTMWVGQWSRTPDLRGDLAHL GSPKVLGMTGREPPCLGPLNGLTFLPEIS
5684	13735	A	6491	280	406	FFVFLGETGFHRVSQDGLNLLT*SARLS LPRCWDYRREPPH
5685	13736	A	6492	1665	1787	FFVLLVETGFHRVSQDGLDLLTS*SAHL GLPKCWDYRHEPP
5686	13737	A	6493	1431	1553	FFVLLVETGFHRVSQDGLDLLTS*SAHL GLPKCWDYRHEPP
5687	13738	A	6494	1740	1862	FFVLLVETGFHRVSQDGLDLLTS*SAHL GLPKCWDYRHEPP
5688	13739	A	6495	1173	1295	FFVLLVETGFHRVSQDGLDLLTS*SAHL GLPKCWDYRHEPP
5689	13740	A	6496	1027	1149	FFVLLVETGFHRVSQDGLDLLTS*SAHL GLPKCWDYRHEPP
5690	13741	A	6497	631	744	VIEHLVSQDGLDFLTS*SARLGLPKCWD YRREPPRPVH
5691	13742	A	6498	166	352	IFFVFLVETGFHHVSQDGLDLLTS*STRL GLPKCWDYRREPPRPAPSSPIFHTVAPIQ YTHP
5692	13743	A	6499	2250	2372	FFVLLVETGFHRVSQDGLDLLTS*SAHL GLPKCWDYRHEPP
5693	13744	A	65	1586	1775	
5694	13745	A	650	1	222	
5695	13746	A	6500	150	368	EKELAFFPQGEMQGGNLG*LKPPLR*R DFSCALPRGGNGRGAPPSPINFGFLGG NGVYPSGPGGFETPDLK
5696	13747	B	6501	174	350	MDEKTKKAEEMALS LTRAVAGGDEQV AMKCAIWLAEQRVPLSVQLKPEVSPTQD IRFLM*
5697	13748	A	6502	1	498	EFRAPGPLGPRTRRPARRVAGSGGPG*G TIFPAPPPSPAPLPGPPLSLPPLKPLRR TGASREERGLCLETDRDARGAPASGGPPG LGTPLGGVRASFPRFPPLVPFPAPPS ADLSRRPLPSHRPTQDPGLVIGQCDASRL PRGQRGTHRAWAAPEATRPG
5698	13749	A	6503	919	1761	RAFSFNREEPTADEQGLPTSVAGRPVIA AVPSWHARGTERRAPGRD*HHPHGLG AQPSAALLPGLP*HCGHISAGGRREAGNI PGRKIIYPPPPQGFYGSNNGHQYIKLSD A/RSLTR*IQSSMTSCRVL R*GPSLPSAGS SPGLGMSCLTSGTSCGYMTSSWPPTDA DLLCSRDCVVS RAGSPGL*L*HGLGPPPV /SPRSLRTCMPRH*SAEQETFLFSFHPNL LGRPLNSKLRGRQPLLSKTL SWHQPSR GLIWCCGSGGDFCGLKIEQKMS
5699	13750	A	6504	131	575	VFALKPGTPGALPQVGVLRDLERPGWV VSGRPFPASSHLGLVPFPAPKCGTLSRR PLPSHRPTQDPGLVTGQL*CFPTAAGTAT AHTGLGPRRKPHRPWLSCSWSPRLFPGD PEVSIFPRKARSPPGEWGTATPDGREDQE SRGNP
5700	13751	A	6505	2	291	HEPQLNSNNVALHGAVIPGPPFLGACIN LMNFMVALFIPEYKIARGVQKH TYKHN GSLTNTIP*RGSEDEIEPLLRDSTIWELFSF EEPQNQCPEL
5701	13752	A	6506	1	267	PRFKLFPCLSLSS*DYR*VPAITPG*FLY FF*VKTGFHHVGQTGLELLTSGDPPTSAS QSAGITGMSHCTWPISFLYLWHTGKKK EC

5702	13753	A	6507	1	216	HEWMGTRVGEWMDEWKEGWKMDGK VDK*MNGWMEGCLYQWLNTEILCQELI PYTCLCLFSGWIYIFKQSILD
5703	13754	A	6508	74	356	
5704	13755	A	6509	2	375	RHEVKPQWTPG*DTDHLPNLSVALGPTR QPGRQRPEGTQVPSIPASSIPASQSQPPQ SQPPNPSSLHPRTPTPSLPIASLIPASPKT QTL*IPASEVGTVSNPTPWTRKLGPGEAN RLSLMV
5705	13756	A	651	3	556	LPTEVAAISFSLAIGKHSATVFSPWAGKP PSRILPHLGPLLQKASWPLRPLVKPKF VKKRPKKFIRHQSDRYVVKIRNWRKPR GIDNRVRRRFKQILMPNIGYGSNKKITK HMLPSGFRKFLVHNVKEQGLEVLLMCN KSYCAEIAHNVSSKNRKAIVERAVAQLAI RVTNPNARLRSEENE
5706	13757	A	6510	3	148	HERREVTVIRRGKHLRLVPTRWAGK GLLG*SICFWSFSLGHHWSVC
5707	13758	A	6511	50	255	LSMSTVLVTTIMKLCY*K*QIQSWLPC LTHTKTHTHTHTHTHKVLHTLTCKQ YYAIIGNVLSFY
5708	13759	A	6512	268	355	
5709	13760	A	6513	2	206	
5710	13761	A	6514	1	317	FFFFFFPLFRQCLTSPRLEYSGTISAHCS LSQPGSSDPPTSALRVAETTGRHHAWLI FVF*VETGLHHVVLAGLELMGSRNQPTS ASQSAGITGVNHRAWLTW
5711	13762	A	6515	2	210	KEKIFSPGFKHPPPPF*KTPLKGKRIFFS PPRKNWPPQRIFKKAPPSSSSSSSSSSSA QI*SFNSP
5712	13763	A	6516	674	985	WFFFWLCHPGWSAVAWWHDLSLQPPP PRLM*FSCLSLLSNWDYRRAPPFLASFVF LVDTAFRHLGQAGLELLTSSDPPTLASQS AGITGVSHRTQLRSSFDS
5713	13764	A	6517	2	336	
5714	13765	A	6518	3	260	CLGLLVIFVCNFQSIRDYRRPPLH*LIFV FLVEMGFYVVG*AGLELLTS*SARLLAS LRAGITGVSHRARPRSFVFGFGWQDHG
5715	13766	C	6519	38	478	
5716	13767	A	652	2	395	
5717	13768	C	6520	33	317	MLTNHLHHWPFFKNXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXTRCPRIITFFLRG*
5718	13769	A	6521	1	253	RRLFFFLRWSFALVAQAREQWCNLG*L QPPSPGFKQFFCFSLLNSWDYRRAPSCPA NFVFLVEMGLYIFKEWDNDGRMICEAF
5719	13770	A	6522	2	411	GVRLSSACPQACPSSTSTGP*AALAGFT TTGSLCWAWTPSSSFVSGSSREAPSGT ATTWTRNVTATSATTANRMAMCTSTR TARLLLAPTTNCSPRSCTLTPIDPCSGGC RLTCKDNTPRLGTGQGRQGT
5720	13771	A	6523	2	222	THIGLPKC*DYKCEPPVHRQFL*F*VETR FHHISQAGFKLTSGDPPALASQSGRITG VTTRTQPLNGFYKVM
5721	13772	A	6524	2	261	VVVVSQYAAERPSVVAHACNPSTLGGR GRWLT*GQQVETSLASGYLPTLASPKCW DYRREPLRLACFNFFVETRNLTLVLPISV QQ
5722	13773	C	6525	203	355	MVALSTRQVHLSGAVVPSSFLIFLIAPS GEQEVDIAMVAGYAVTSVVLL*

5723	13774	A	6526	2	671	GVGGVGRGMLPPAPPRAPAGFPSTILW PSPPLL*LPPPGLGTGFLPFHGCPPLSQS PWILFPWGGAAQAPPL*P*PRHPCPPHPR QSYGRQLPTFWLAPPSFCLSLVFSSLSLIL SLSSVSRSVLLP*HPPPHISFHLGFLS*AS PISGVGGIKAFPLPLRFQPPF*PLIPTPLSL PKMGALWGRL*HSTPAQAMGSRAPFSG LAQASTYLLQPFQVVGVS
5724	13775	A	6527	3	477	AGKFPLRSGHFPCFLTVESVCSGPFKPSV IPLSPCGASAPSPRFLSPSPGLVRAVLHC TLLVAS*APPPASPPGVAVFSPVSIWHP RLPGSYGLCGQHRLDPTKPRSRTHFRAG VPPLVSCSLPSPNLPLMTSGVQRPPKGLE NSLLQLADLNK
5725	13776	A	6528	1	381	
5726	13777	A	6529	1	2654	MSFFSTLKTALSKEKLAATGVLVLICAL VGAGFAWERHQLKQAEIGSLDQAVK ERDKSIMDLNQTIETMNKAEQHFHSQEV KNESEQAKYADRQMERKAEVQKQLVA AGNVRQRIADTQRLRESISEFNADAD KGIFMSDKVTVKQTINKATSIYKIEQITV GKPGSEQYRRAFELADQLGLKHPDCIEH VFPTYADEQCTHVLTEEDFFSTEEREGV DRCIGVICSSVDELFPNVPEYGGIGYQF LYEGDELKCYEHDIESKAKELTVNSNNT VQPVALMRLGVFVPKPSKSKGESKEIDA TKAFSQLEIAKAEGYDDIKITGPRLDMDT DFKTWIGVIYAFSKYGLSSNTIQLSFQEF AKACGFPSKRLDAKLRLTIHESLGRLRN KGIAFKRGKDAKGGYQTGLLKSWRADS KLWELFQLDYRVLQHHALRALPKKEA AQAIYTFIESLPQNPLPLSFARIRERLALQ SAVGEQNRIKKAIEQLKTIGYLDCSIEKK GRESFVIHTYLIPAIPPQHIIQCDFPLSHIL DFYSPSSTHRSCRASRSHQIESEAWLPIE AGNHQNDSGYNLNVEEIRVLYAWRMPK HVVTHLAKDQLHKVAQRANRMLNVL EQVQLQKDELHANEFYQVYAKAALAKL PLLTRANVDYANIDIYEHARGVPKYRDR YSERGVSKTVSTVSLAHAMRAHPHLLM EDLRILVIDLDPQSSATMFLSHKHSIGIVN ATSAQAMLQNVSRREELLEEFIVPSVVP VDVMPASIDDAFIASDWRELCNEHLP NIHAVLKENVIDKLKSDYDFILVDSGPHL DAFLKNALASANILFTPLPPATVDFHSSL KYVARLPPLV/KLISDEGCECQLATNIEK QTNNWANP
5727	13778	A	653	1	1055	TDCRVDPVRPRVRVEHSIVGTRLVSCQ LQPSQPNADQGKLTMMRIAIVICFLLGIT CAIPVKQAESGSSEKQLYNKYPAIVA TWNLPDPS/QVRQNLLGPTGPFPSKVQR KGHGPHGMIWDGWKVDDDPDPC/VDSQDS IGLGTLLDDVDDTD/DSHQSDSHHSDS DELVPDFPTDLPATEVFTPVVPTVDTYD GRGDSVVYGLRSKSKKFRRPDIQYDAT DEDITSHMESEELNGAYKAIPVAQDLNA PSDWDSRGKDSYETSQDDQSAETHSH KQSRLYKRKANDESNEHSDVIDSQELSK VSREFHSHEFHSHEDMLVDPKSKKEEDK HLKFRISHELDSASSEVN
5728	13779	A	6530	1	945	

5729	13780	A	6531	146	4368	LGFLRLSEMPRKQGDYRT/SDMEIRGR VEQRVGYTIEQINHMVDVFGTRLRRAED VFPVIGVAAHKGGVYKTSVSVHLAQD LALKGLRVLLVEGNDPQGTASMYHGW VPDLHIHAEDTLLPFYLGKDDVTYAIKP TCWPGLDIIPSCALHRIETELMGKFDEG KLPTDPLMLRLAIETVAHDYDVIVIDSA PNLGIGTINVVCAADVIVPTPAELFDYT SALQFFDMLRDLLKNVDLKGFEPPDLAI LF
5730	13781	A	6532	820	2011	TTTLVRLPCRSPKRRRIKALRSQRLGLPM MRVPSFRLRVTSPTFMKSLTWQVHLLVL MLLVMFWTCNPSVCTASYVAAMCWW QAPMAPAKPQPSRWKTSKARMYQSQK VAKTSTLTVLSLLITVPAAYFTRLMLL LPLMRVPSFRLRVTSPTSMKSLTWQVHL LVLMLLVMFWTCNPSVCTASYVAAMC WWQAPMAPAKPQPSRWKTSKARMYQS EKVAITSTLTVLSLLITVPAAYFTRLML LLLPLMRVPSFRLRVTSPTSMKSLTWQV HLLVLMLLVMFWTCNPSVCTASYVAA MCWWQAPMAPAKPQPSRWKTSKARM YQSEKVALTSTLTVLSLLITVPAAYFTR LLMLLVSKSL/CTCSLNYNIGQIALSFSKA PDKGTEIAIERGANGDVLDMQSVGVYSQ LRRRYVLVASSDGTSTATFKMEDFEGQ NVPIRKGRITNIYVSRIKSVVDNGSGSLLH SFTNAAGEQITVTCSLNYNIGQIALSFSK APDKGTEIAIERATDDACTFIPVTRDQSDI YEVFNAGSSFGSYAAGDVLDMQSVGV YSQLRRRYVLVASSDGTSTATFKMEDF EGQNVPIPKGRKNYVNRKSVVDNGSG SLLHSFTNAAATADACTFIPVTRDQSDIY EVFNAGSSFGSYAAGDVLDMQSVGVY SQLRRRYVLVASSDGTSTATFKMEDFE GQNVPIRKGRNNIYVNRKSVVDNGSGS LLHSFTNAAATADACTFIPVTRDQSDIYE VFNAGSSFGSYAAGDVLDMQSVGVYS QLRRRYVLVASSDGTSTATFKMEDFEG QNVPIRKGRITNIYVNRKSVVDNGSGSLL HSFTNAAGEQITVTCSLNYNIGQIALSFS KAPDKGTEIAIERGSST
5731	13782	A	6533	1	3039	MLNVLTEQVQLQKDELHANEFYQVYAK AALAKPLLLTRANVDYAVSEMECKGYV FDKRPAGSSMKYAMSIQNIIDIYHRGVP KYRDRYSEAYVIFISNLKGGVSKTVSTVS LAHAMRAHPHLLMEDLRILVIDLDPQSS ATMFLSHKHSIGIVNATSAQAMLQNVSR EELLEEFIVPSVVPBGDVMFASIADDAFI ASDWK/ELCNEHLPVLKLSDEGCECQL ATNIGFMSKLSNKADHKYCHSLAKEVF GG
5732	13783	A	6534	1	2607	
5733	13784	A	6535	1	4557	
5734	13785	A	6536	3	2847	ELHAYAMSIQNIIDIYHRGVPKYRDRIL AHAMRAHPHLLMEDLRILVIDLDPQSSA TMFLSHKHSIGIVNATSAQAMLQNVSR ELLEEFIVPSVVPBGDVMFASIDDAFIAS DWRELCNEHLPQNIHAVLKENVIDKLK SDYDFILVDSGPHLDAFLKNALASANILF TPLPATVDFHSSLKYVARLHELVLKLSN EGCECQLATTIGFMSKLSNKADHKYCHS LAKEVFGDMLDVFLPRLDGFERCGES
5735	13786	A	6537	1	4236	
5736	13787	A	6538	65	316	
5737	13788	A	6539	54	265	

5738	13789	A	654	2	1103	PGRPTRPPTRPGGGRAQHRLYQTLQSAS CSLLSQTPTRGKLTIMRIA VICFLLGITC AIPFKQADSGSSEKHFVYNKYPD VAT WLKP*PIFRRQNLLGPTWLCPLKETNGL *TRRTL SKLRSNGKAMDHMDMG*WK VDGWTMWDSQDSIDSNDSDVDVDDTD DSHQSDSHHSDESDELVTGFSTDLPAT EVFTPVVPTVDTYDGRGDSVVYGLRSKS K KFRRPDIKYPDATDEITSHMESEELN GAYKAIPVAQDLNAPSDWDSRGKDSYE TSQLDDQSAETHSHKQSRLYKRKANDES NEHSDVIDSQELSKVSREFHSHEFHSHED MLVVDPKSKEEDKHLKFRISHELDSASS EVN
5739	13790	A	6540	2034	2174	EMPGHARC YADQQR YRFLPGSEVLP/ASI NVAWRPVDNLNTCSTRSPE
5740	13791	A	6541	33	285	
5741	13792	A	6542	1	2448	
5742	13793	A	6543	1	2979	
5743	13794	A	6544	1	3276	
5744	13795	A	6545	1	67	MTKCSHLCNNYLF SWLRDNGILIATGER RNVRKQ EYISRGYFTLKETVIDTSNGSRI SFTTRITGKGQQWLMKRLLDADVVRTTS IVMLAKVTFLSCITMSDFTFSGYELACFV THSGLSRSAGHILSQCANLAATTSEYFIH KPHRLITAETGYSQSTVVRAFREA VNK ILSVEIVIGDHRERRANLYRFTPSFLAFAQ QAKNALIESKLKISSAATKVAVLAKTL ALFNFLSTPPCQNDTPSPCQDDVAIKNK KSQVKKT KRSVSGGAGTTS LKLT SWIA KAKAKADNLR LSKKRTQKHEFKQKVEA AARKYAYLKNKRSPDIGGISNFDNLPHC MTVNEALNAVLA KNKDNEQWGAVAGA YIADITDGEDRARHFGLMSACFGVGSV YMQTRYRGKLV SQGFVVQMILTPRAD GTFITSTDSETVHYHYGPKDLVTILFYIFI TILHAVVQEYILDKISKRLHLSKVKHSK FNESGQLVVFHFTSVIWC FYVVVTTTQA LTRVLNCLLALGSNAAVMGECGFAQLQ QTWASALADYAAAHKSMRPEILASCH QTLNCLIESTRNSMDATNK/ADAGICRS RDDRERF*RCYASAFIPRDDPACSVGGSY R*CVITEF
5745	13796	A	6546	1	3435	
5746	13797	B	6547	9377	1600	MSDWSRV TGMKVHASAVAAPN*TGR II ARNKGRRITPSETLIISAATDSSIALLVAS MLLRVDSL SIAISVPLSGALENDRAI
5747	13798	A	6548	3	127	LFHPCQDSQQHH*CVCCRLTG HGAA*V HGPCQAVQTYRASH
5748	13799	A	6549	2	323	
5749	13800	A	655	3	267	TINPKLLKNHARGTPEVPNQKHHWSPKQ KPLLTKNPKNLPRWPVPIPPFPEEKPR KFP*TPKRRIP*TKIGPLPSNPGYPTKPPF
5750	13801	A	6550	2	94	
5751	13802	A	6551	171	632	
5752	13803	A	6552	3	325	
5753	13804	A	6553	2	171	

5754	13805	B	6554	104	1164	MCDEDETTALVCDNGSGLVKAGFAGDD APRAVFPSIVGRPRHQGMVGMGQKDS YVGDEAQSKRGILTLKYPIEHGIITNWDD MEKIWHHTFYNELRVAPEEHPTLLTEAP LNPKANREKMTQIMFETFNVPAMYVAI QAVLSLYASGRTTGIVLDSGDGVTHNVP IYEGYALPHAIMRLDLAGRDLTDYLMKI LTERGYSFVTTAEREIVRDIKEKLCYVAL DFENEMATGRHPSILPWKRATSCQTGGV ITIGNERFRCPETFFQPSFIGMEVGGHFR PPYNSIMKCDIDIQGPCMPTNVMFGGH PRLYPWEFADPHARKRFTGAGTPGTHEE SKDKDSFAPRRSGKILG*
5755	13806	A	6555	1	308	LRPWC/GHLRT*AQYHTLRAARLDPNFA IA*MEAKATDGGPPFE/VRGFPTTYFSPA NNRLHPRTSEGGRDLSDFISYLHVEATNP PVIQEV*PKKKKKAQEDL
5756	13807	A	6556	2	589	AIRTAKEKFVMQEEFSRDGKALERFLQ DYFDGNLKRYLKSEPIPESNDGPVKVVV AENFDEIVNNENKDVLEFYAPWCGHCK NLEPKYKELGEKLSKDPNIVIAKMDAT ANNVHSPYEVGRGFPSHILLSKPNKKNP KKYEGGRELR*FLLAIYQREATKPPVVIQ V*FIPKYRRRRHQEDLLKPVAQTPTL
5757	13808	A	6557	1	129	
5758	13809	A	6558	23	115	
5759	13810	A	6559	1	1582	GRGWRAVLGWSRRRSGLPATVGSSMA LLFLLPLVMHGVSRAMGTADLGPSSVP TPTNVTIESYNMNPVYWEYQIMPQVPV FTVEVKNYGVKNSEWIDACINISHHYCNI SDHVGDPNSLWVRVKARVGQKESAYA KSEEFVACRDGKIGPPKLDIRKEEQIMI DIFHPSVFNVDGEQEVDPETTCYIRV YNVYVRMNGSEIQYKILTQKEDDCDEIQ CQLAIPVSSLNSQYCVSAEGLHVWGV TEKSKEVCITIFNSSIKGSLWIPVVAALL FLVLSLVFICFYIKKINPLKEKSILPKSLIS VVRSATLETKPESKYVSLITSYQPFLEK EVCCEPLSPATVPGMHTEDPNGKVEHT EELSSITEVVTTEENIPDVVPGSHLTPIER ESSSPLSSNQSEPGSIALNSYHSRNCESD HSRNGFDTDSSCLESHSSLDSEFPNNK GEIKTEGQELITVIKSPPPSFCYDKPHVL VDLLVDDSGKESLIGYRPTEDSQRNH EISLSCTQL
5760	13811	B	656	197	404	EQQQLQAQHLSHGHGPPVPLTPHPSGLQ PPGIPPLGGSAGLLALSSALSGQSHLAIK DDKKHDAEHHRX*
5761	13812	A	6560	69	523	PLGCASSQSIASRNTLCTTASSCCPQVL AHSKAAEYMTRWKVQQMPHSQDRAL QSVFCAPFHS**LVALPTGHR*MTPAQFS ECFQATSGGSD*DPFLAPSFLVPGLPVAP GLLLPLGPVHSRATMEEGQATHEELTVFI GLRPGVRS
5762	13813	A	6561	101	1469	RTHPTFPHPGTGPTSAPPSGALEGTAGTI TSNEWSSPTSPEGSTASGGSQALDKPIDN DGEVWSPDIEQSFQEALAIYPPCGRRKI ILSDEGKMYGRNELIARYIKLRTGKTRTR KQVSSHQVLARRKAREIQAKLKDQAAK DKALQSMAMSSAQIISATAFHSSMRLA RGPGRPAVSGFWQGALPGQAETSHDVK PFSQQTYAVQPPLPLPGFESPAGPAPSPS APPAPPWQGRISVASSKLWMLEFSAFLE QQQDPDTYNKHLFVHIGQSSPSYLRPYL EAVDIRQIYDKFPEKKGGKLDLFERGPS NAFFLVKFWADLNTNIEDEGSSFYGVSS QYESPENMIITCSTKVCSFGKQVVEKJET EYARYENGHYSYRIHRSPLCEYMINFIHK LKHLPEKYMMSVLENFTILQVVTNRDT

						QETLLCIAVFEVSASEHGAQHIIYRLV KE
5763	13814	A	6562	1	1290	
5764	13815	A	6563	604	1047	SNNRTDNPTSVAYLSKETDVVAKGWPH CLWVVAVAILVLEAIKIIQKDFTVWT SHDVNGILGAKGNSWLSKRLRYQAL LLEGPVLQIHTCVALNPAIFLPEDGEPIKH DYQQIVAQTYVT*EDLLEVPLANPDNL YTNGSSFV
5765	13816	A	6564	1	1410	
5766	13817	A	6565	510	755	
5767	13818	A	6566	59	411	SWPSDKQTLVVQRGQKMEQANHPDPTD HMSQLMWT/VLPQGFRDSPHLFGQALA QDLGHFSSPGTLVLQYVDDLLATSSEA SCQQATLALLNFLANQGYK/LSRSKAQL CLQQVKYLCL
5768	13819	A	6567	1	565	
5769	13820	A	6568	126	492	CNNSMTSLQVRLKVCPRPCRTSM/LPIRII *KLPQVCLDLL*IREGEWDMYPCWAKFP CPYSLKGT*PIAWGILWSFGDFAY/IPLM QQQKH*FSSQNTRRNEEGQI*WPLLMHS QKPAPLPVV
5770	13821	A	6569	1	342	
5771	13822	A	657	2	651	LSRVLEFEFQFLQAQYHSLKLECEILAS EKTEMHRHYVMYYEMSYGLNIEMHKQ TEIAKRLNTICAQVIPFLSQEHQQQVAQA VERAIQVTMAELNAIGVRGLPGLPPTQQ QLQAQHLSHGHGPPVPLTPYPSGLQPPGA IPPLGGSAGLLALT/SALDGQSHLAIKDD KKHHDA*HHRGDRPGKPD*DFVLILLQC CKVVCIAKESPNLYREQT
5772	13823	A	6570	55	219	LGKXHLGSDIDPRGSWVTGEYIFLRPIIA A*GRQ*DFLPPELWWTSLNNSWAFS
5773	13824	A	6571	339	1371	ASHPLRGLLCGPSLPNEPCPLLHGTSRHR PLKG*GVRAHSTGLAGSSTCRPLRDLG EASWAPESAQGL*IHQSALCI*LKLKPAQ QRAKLGDRLDIPDRRKSSTILGRAGDLQ PAMPEPPTLSVGSCAAQASPMNPAPCST APSPIDHSRAECCGRIARDWQAAPPAGP CGIHWVKPAGLLSLLRDCKYTNRHVSVS SRFANTNQHPASSSGFVNAPIDTLYLANL VGTWRTFVASSGIVNAPISTLSKQTTWL YQSAGCGKESTQASGAQTGTSFKSLET TGSISEASSAKHCTELFSRFTTFNPDSVPS DGVVGDTAGTVWPGVLKGEPCHLGTCY RCVLDPHPTPSESDTIQGIHVQCYMSTL HDADVCDTNDPVTHNTKKYIYSTEIFTS NNPELRSEDET VFRALEK WKTSEQTIGE MDFYICNDPHPSALYQNGLSKMQDTV SLSVFSPSVAA
5774	13825	A	6572	749	1002	QLKKGTSNLLVSKPSPVWIPTGTLTQIMG TGVANIC*PVF*KD*GELGKMNYAMMS TITQGKEENPAFLKWLWEALRKYTPLSP
5775	13826	A	6573	1	1632	
5776	13827	A	6574	307	543	

5777	13828	A	6575	1	1149	
5778	13829	A	6576	119	409	GDICHHLGLTPVGSHLLSCSR*QVA*VG AVTAATIGTGILLQLAFLVCNWLLSG SSENFPRSALICFKSEREKGTICQVGNPSP PPTACKGHN
5779	13830	A	6577	1	2433	
5780	13831	B	6578	97	1065	MHAVHTSLLVERTILTTTKERGSTLQYPL RPGAHKGLQDIVKRFKAAQALIRKCSSPC NTPILGVQKPNGQWRLVQDLRLINEAVI PLYPVVPNPYNLLSQIPEEAEWFTVLDLK DAFFCIPLHSDSQFLAFEDPTDHTSOLT WTVLPPGFRDSPPLFGQALAQDLGHFSS PGTLVLQYVDDLLATSSEASCQATLD LLNFLANQGYKTHSRSDAPVGFTDRHL VATEKIPRGREPLSSLAVYTRGRPRTGA RRTIVSRIRRDFFRYRYLAQREPLYQQ SLLIHLQLDSQPALSVVIGKVPNVVELTP NFGTAAQV*
5781	13832	A	6579	1	2403	
5782	13833	A	658	455	1033	GLYFGKVGEVIEQVKAFDELKALIAFFPL SSLSFLAPFVCLLNLLFCRLPLLSCLFSP GCRLHRHHCHHYLLLLLLFLSHHHHQ QQQLQAQHLSHGHGPPVPLTPHPGLQP PGIPPLGGSAGLLALSSALSGQSHLAKD DKKHHDAEHRGERPGKPD*DFVLILLQ CCKVVCIAKESPPLYREQTMR
5783	13834	A	6580	1	2838	
5784	13835	A	6581	1908	4698	SNDRTEDDCGKHPPMSSPPTEPWVCLII EGQEIDFLDGTTFSVLIPCLGRLSSRSV TIQGILGQPVTRYFSHLLSCNWETLLFSH AFLVMPESTPLGRDILAKAGAHSMKT GNKLPICCPLEGINPEVWALEGQFGRA KNAHPLQIRLKDPISTFYQRQYPLRPEAH KGLQDIVKHLKAQDSVRKCSSPCNTPI GVQKLNSQWRLVQDLRLINEAVIPLYPV VRNPYTLLSQVPEEAEWFTVLDLKD
5785	13836	A	6582	1529	2945	
5786	13837	A	6583	3	154	
5787	13838	A	6584	3	425	
5788	13839	A	6585	3	223	
5789	13840	A	6586	3	330	
5790	13841	A	6587	50	1740	RSPHCCLTAHLTMSAARLTMMWEEVT CPICLDPFVEPVSIIEGHSFCQECISQVGK GGGSVCAVCRQRFLLKNLRPNRQLANM VNNLKEISQEAREGTQGERCAVHGERLH LFCEKD GKALCWVCAQSRKHRDHAMV PLEEAAQEYQVRPKRHLEKLQVALGELR RKQELAEKLEVEIAIKRADWKKTVETQK SRIHAEFVQQKNFLVEEEQRQLQELEKD EREQLRILGEKEAKLAQQSQALQELISEL DRRCHSSALELLQEVIIVLRSSESWNLKD LDITSPELRSVCHVPGLKKMLRTCAVHIT LDPDTANPWILSED RRQVRLGDTQQSIP GNEERFDSYPMVLGAQHFGHSGKHYWEV DVTGKEAWDLGVCRDSVRRKGHFLSS KSGFWTIWLWNKQKYEAGTYPQTPSHL QVLPCQVGIFLDYEAGMVSFYNTD/HGS LIYSFSECAFTGPLRPFFSPAGINDGGKNT APSNPLVPLNIGSQGSTDYWMAFSGTLP LSPHWAPASSATKPWPLFPHGTLEPPLSS AEASRDPQQASFSREVTSPINIPAPDGVV
5791	13842	A	6588	2	472	
5792	13843	A	6589	1	239	QCCSGGTHGNPAIGDRAMQKQILPWAPA QMKIRFMAPPERKYSVWIAAPILASLSTS SRMWISKQEYDESGPSIVHRKCF
5793	13844	C	659	178	360	MERPERKIXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXX

						YYSFKNLI*
5794	13845	A	6590	1	834	
5795	13846	A	6591	1	702	
5796	13847	A	6592	1	1623	
5797	13848	A	6593	1	1132	MEEEEIAALVIDNGSGMCKAGFAGDDAP RAVFPSIVGRPRHQGVMVGMGQKDSYV GDEAQSKRGILTLKYPIEHGIVTNWDDM EKIWHHTFYNELRVAPEEHPVLLTEAPL NPKANREKMTQIMFETFNTPAMYVAIQ AVLSLYASGRITGIVMDSGDGVTHTVPI YEGYALPHAILRLDLAGRDLTDYLMKIL TERGYSFTTTAEREIVRDIKEKLCYVALD FEQEMATAASSSSLEKSYELPDGQVITIG NERFRCPALFQPSFLGMESCGIHETTFN SIMKCDVDIRKDLANTVLSGGTTMYPG IADK\MQKEITALGPSTMKIKIAPPERKY SVWIGGSILASLSTFQQMWISKQEYDES GPSIVHRKCF
5798	13849	B	6594	635	646	MCDEDETTALVCDNGSGLVKAGFAGDD APRAVFPSIVGRPRHQGVMVGMGQKDS YVGDEAQSKRGILTLKYPIEHGIITNWDD MEKIWHHTFYNELRVAPEEHPVLLTEAP LNPKANREKMTQIMFETFNTPAMYVAI QAVLSLYASGRITGIVLDSGDGVTHNVP IYEGYALPHAIMRLDLAGRDLTDYLMKI LTERGYSFVTTAEREIVRDIKEKLCYVAL DFENEMATAASSSSLEKSYELPDGAGHH HRQRALPLPGDPSFIGMEVGGHFRPPY NSIMKCDIDIQEGPFMPTTFMSGGTHDVP WESLTACRKEITRAGTPAPMEDQDSFAP AGAQNTRVWIGGSILASLSTFQQMWITK QEYDEAGPSIVQPQMLLDLHLQARDFS RTNLLNNGGG*
5799	13850	A	6595	1	1284	MGDTPRQFGGARPRSGGALRGCRSRGG GNRRGLCLSRALANGDRRLTMDDIAA LVVDNGSGMCKAGFAGDDAPRAVFPSI VGRPRHQGVMVGMGQKDSYVGDKAQ SKRGILTLKYRIEHGIVTNWEDMEEIWL HTFYSELHVAPEEHPVLLTEASLNPKAN HEKVNQIMFETFNTPAMYVAIQALLSLY ASGRITGIVMDSGDGVTHTVPIYGGYA LPHTILHLDLAGPDLTDHLMKILTERGYS FTTTAKREIVHDIEENLCYVALDFEQEM AMVASNPLEKS*ELPDGQVITIGNERF RCPEALFQPSFLGMESCGIHETTFNSIM K\CDVDIRKDLANTVLSGRTPPCTLGIA DRMQKEITALAPSTMKMKIAPPERKYS VWIGGSILASLSTFQQMWISKQEYDESGP SIVHRKCF
5800	13851	A	6596	1	370	ETESRSVAQAGVQWHNLGSLQSPSGFK RFSCSLPSNWDYRHPPSCPANFCIFVET RFHHVGQAGLKLLTSGDPPTLAS*IAGIT GMSHCAWPSLHTWTLLFAKCPRRWTG QVLLAAIFSQ
5801	13852	A	6597	2408	2810	IHTHTHTHTHTIFFLKRSEFALVAQARVQ WRDLCSLKPPPEFKQFSCSLSPSS*DYR CPPPCPANF/SFFFVFLVETGFHHVGQAG LKLLTSSDSPTLASQNAAGVTGMSHCAWP QSNKYYQNNFTMIQEQQQQKE
5802	13853	A	66	275	577	GGWITRSGVQDQSGQHSVDVSL/LKKYK KLTKYGGVLL*SQLS/RLRQDNHMPNG GRSCS*PRQHHCTPAWVTVRDSISKKKK KKNNKKKEKKGKKALLEPG
5803	13854	A	660	365	800	INVNFLEFYMTDITCFLFSYSLTMSPIYL DVLLLSLLFLFHIAGMHILTFINHDI*VV HSFYLR*HAMEITVYEFICLRIRYPFKAS KIFSMYNATVLFHI*CDR*LGS*IGILERS

						VGVC SVMVCIVYIRYVISSSV DAP
5804	13855	A	6600	111	426	RIYKDRAGSPAHSQC HRDPLRTSPRGPH SLPWGQVAAQSDAETEATHMGAPSC LGP AQLPLEPGGRGSH TTSVDSRHDSVEGFR DSRQTESPWNDEN*NLLDYGSL
5805	13856	A	6601	1	2219	
5806	13857	A	6602	1	221	
5807	13858	A	6603	2	217	
5808	13859	A	6604	101	456	
5809	13860	A	6605	62	558	
5810	13861	A	6606	2	178	
5811	13862	A	6607	1	194	
5812	13863	A	6608	59	132	
5813	13864	A	6609	3	104	
5814	13865	A	661	2	58	
5815	13866	A	6610	2	620	GFRPGDPRVRETGV LKPGMLVTFAPVN VTGGVKS VEMHHEALSEALPGDNVGFN VKNVSVKDVRRGNVAGDSKN D P P M E A AGFTAQV I I L N H P G Q I S A G Y A P V L D C H T A H I A C K F A E L K E K I D R R S G K K L E D G P K F L K S G D A A I V D M V P A R P M C V E S F S D Y P P L G R F A V R D M R Q I V A I V G V I K A G D K K A A G A G K V T K S A Q K A Q K A K
5816	13867	A	6611	293	384	
5817	13868	A	6612	39	543	QVAMGNLSGLRLAAGSCFRLCERDVSSS QRLTRSSDWKGNGFCITKPTGKVP GAP IPALTNRVPFNTKPTDWQKKRPLIWSRS PSKMEDEIPQ\SLSPLEDALNACQRTKMP SERSSLSQWICPDGGMDCIFMVEGQK\ AA\QRHDDFTQA*TLEKKARLERGKQL
5818	13869	A	6613	1	194	
5819	13870	A	6614	71	1145	NLRREPTNSR TLTVGATAGSITMKRLVC VLLVCSSAVAQLHKDPTLDHWHLWK KTYGKQYKEKNEEA VRR LIWEKNLKFV MLHNLEHSMGMHSYDLGMNHLGDMTS EEVMSLMSSLRVPSQWQRNITYKSNPNR ILPDSVDWREKGC VTEVKYQGSCGACW AFSAVGALEAQLKLKTGKLVSLSAQNLV DCSTEKYGNKGCGNGGFM TTA FQYIIDNK GIDSDASYPYKAMD LK CQYDSKYRAAT CSKYTEL PYGR*DVLKEAVANKGPVSV VV\ DARQPSFLPLQESGVYYDPS\CTQWV NHGVLVVG YGDLNGK\ EYWL V*NSWGP WFGEEGYIR/LWARNKG NHCGVASFPSY PEI
5820	13871	A	6615	2	289	
5821	13872	A	6616	2	125	
5822	13873	A	6617	9	106	
5823	13874	A	6618	2	505	
5824	13875	A	6619	1	104	
5825	13876	A	662	218	342	
5826	13877	A	6620	1	109	
5827	13878	B	6621	99	285	MPRKIEEIKDFLLTARRKDAKSVKIKKN KDNVFKFVRCSRYLYTLVITDKEKA EKL KQSLPXX*
5828	13879	A	6622	239	449	NCGNQRTSLRHRPTKRM P NSCQDPRKIR TLVKFKVRCSRYLYTLVITDKEKA EKLK QSLPPGLAVKELK
5829	13880	A	6623	1	104	
5830	13881	A	6624	1	109	
5831	13882	B	6625	99	285	MPRKIEEIKDFLLTARRKDAKSVKIKKN KDNVFKFVRCSRYLYTLVITDKEKA EKL

						KQSLPXX*
5832	13883	A	6626	239	449	NCGNQRTSLRHRPTKRMPSNCQDPRKIR TLVKFKVRCRYLYTLVITDKAEKLLK QSLPPGLAVKELK
5833	13884	A	6627	2	129	YGPTHASGAMLRSCAARLRTLALCLPP VGRRLPEASRDPS
5834	13885	A	6628	1	289	
5835	13886	A	6629	6	418	RRLMRDFKRLQEDPPVGVSGAPSENNIM QWNAVIFGATFKLVIEFPPEYPNKPTVRF LSKMFHPNVYADGSICLDILQNRWSPTY DVSPILTSIQSLLDEPNPNPANSQAAQL YQENKREYEKRVSAIVEQSWNDS
5836	13887	A	663	527	665	
5837	13888	A	6630	3	330	ARRRLMRDFKRLQEDPPVGVSGAPSEN NIMQWNAVIFGYADGSICLDILQNRWSP TYDVSSILTSIQSLLDEPNPNPANSQAA QLYQENKREYEKRVSAIVEQSWNDS
5838	13889	A	6631	51	418	
5839	13890	A	6632	3	141	
5840	13891	A	6633	1	581	HSDSAAAPGGGGAARDFFFFQTDRRGSC GACSTPARRRLMRDFKRLQEDPPVGVSG APSENNIMQWNAVIFGPGTTFEDGT F*LIVIEFSEEYPNKPPITVRVFIPKMFSP NVYA*WVGICLADILQNRWESQHMDVS FLSLTFNSVSGWDEPNP*QSSPIAQAAQL YQENKREYEKRVSAIVEQSWNDS
5841	13892	A	6634	2	266	YCGPL*SVWVARNPPGFAFVEFEDPRDA AGVV*ELDGRTLCPGPSWGHPR*DDYC RRGLPPRRRPPRRRLNLSRSRSLYSPWT LSL
5842	13893	A	6635	3	164	
5843	13894	A	6636	1	947	IFLVFFITEMHRDSCPLDCKVYVGNLGN NGNKTELERAFGYGPLRSVWVARNPP GFAFVEFEDPRDAA*V*YLCPLRTLGC RVRVELSNGEKSRNRGPPPSWGRRPRD DYRFPSMLFSLSLLSNLNQIGSSHLDRPHI PGQSAQLFIYQMSSQQLQQQPSANKKAG KIHNTPFANQLNPTATSGQNLFRQILPGP SVRAGLTFTISSLLKPKTNLQEGEASLAA GAGPFLEIGEERDRCLGREITSRPDPSGL VVDLGQMKGNRRQFAREVYRKLHLT GVCTENFKFCLRLHKLGAFLRCFSCSNL FVS
5844	13895	A	6637	1	282	
5845	13896	A	6638	116	561	PLDLEMHRDSCPLDCKVYVGNLGNNG NKTLELERAFGYGPLRSVWVARNPPRP LAFVEFEDPPRMQLDAVPRS*DGKNTNV ACPCKEWELVRMGEKRSRNRGPPPSL/ WGRRPRDGFIRREGVPPTLFGSRPRKGG RFLFAARSRLS
5846	13897	A	6639	126	376	VLLARLQANGANTVELSAEWTFPSGYV GSVLPQGHREPNA/CLSFSKFRVLGSAP FLINRRTASNCVNR/CRLAATWRAVLPL
5847	13898	A	664	1233	1706	CLVFWLLYYPGLQLPFHLLPHSLGSGQQ SSEESAATPSLAEGRREAAFRCPAGLA RQAWRPHARLPGAAPLAAPSLAPLPTG RSGRWLPMCAASC*SPSPAMSVYPQRR LGQGAEDSEGPPVSRGCRAPGPQRPLA APGEQTAARTQAICLIW
5848	13899	A	6640	464	781	AFAFTKDRQLGSSKKRRMSSRFASSAAK CRAVRPLLSRRFPVPMPPGPVWSSTK LGSRLGRHQASCRG*SQRAR*SLTGPT HMEPNKVRSTGLKFLPAQQS
5849	13900	A	6641	201	318	EINLTNFI CFSSRSDVS*RESPFSRELHRIS SISLEPG

5850	13901	A	6642	1	1714	
5851	13902	A	6643	1	789	
5852	13903	A	6644	1	293	SPEMESHPIITQAGVQWHNHSSLQPEIPGL KQSSHLSPSSWDHR*EPLPWPKNIFKM LIL*IGFSHVIGNNGTYLYQSINNVEGPLK RSQKDRSCGN
5853	13904	A	6645	1	252	
5854	13905	A	6646	1	1974	
5855	13906	A	6647	3	320	
5856	13907	C	6648	238	324	MADLPIFLVEFSCFIIFYNGSFMFSQKK*
5857	13908	A	6649	1	1088	
5858	13909	A	665	598	1159	CRQTGVKIYDVWFFWLLYYPLQLPFFHL LPHSLGSGQQSSEESAATPSLAEGRREAA FRCGPAGLARQAWRPHARLPGAAPLA APSLAPLPTGRSGRWLPMCAASC*SPSP AMSVYPQRRLGQGAEDSEGGSVSRGC RAPGPQRPLAAPGEQTAARTQASVYLL PHSPPLLALHIIHLLPPS
5859	13910	A	6650	1	368	
5860	13911	A	6651	3	243	
5861	13912	A	6652	24	288	
5862	13913	A	6653	2	272	
5863	13914	A	6654	965	2737	AASPGVLVCPQARTYIQLPPLADVQLTP LPTTGFPAAIDLLGRMLVLDSDQRVSA EALAHAYFSQYHDPEDPEAEPPGCGR HKLTLHLLELTYQEVLSWDEAAGRRS PPPALPRLRPSPGSGPPAAAASGFRRW AAPGPAMSSPPPARSGFYRQEVTKTAW VRAGACAGCPAFPLSGPPRSSAVDGRG AKVAIKKLYRPFQSELFANPARVLCCILN PMWPPQVIGHAEAGSVR*QRSGPSHSYL VMPFMGTDLGKLMKHEKLGALRGCAE ACHHAWEGGAQWPPFLCPHRS LGVP*N PPPQFFPQILDFGLARQADSEMTGYVVT RWSHPVPLPTTELTRASISVDIWSVGCIMA EMITGKTLCSPPGGSGGPDLPWPPSCVP DLGADLDQLKEIMKVADLGLGVGPSFPL PTQAKNYMKGLPEWSVGPPVWPDAPS PAAVNLEKMLVLD AEQRTAGEALAH PYFESLHDTEDPQVQKATTDGSPSLPSDP HASPGHPGLGDVIAISSGATLTGMAAV HTGPKVWAHRWPEDWGVAFALQTPRPP RLSPQVFLRPGRVGLGAALDPDGPWGA GRDL
5864	13915	A	6655	3	229	
5865	13916	A	6656	27	142	
5866	13917	A	6657	3	308	
5867	13918	A	6658	192	310	
5868	13919	A	6659	88	1506	ACGRFGFPEGPEGGRGRHVRAARGPVG PRAGEGPCAAWVGVPGPSAPGTSLREG PGAGAPQRPAGGRASGRAARSPEARA EGAPSPVVGAPPAGSAGWAAPGPAMSS PPPARSGFYRQEVTKTAWEVRAVYRDL QPVGSGAYGAVCSAVDGRGTAKVAIKK LYRPFQSELF AKRAYRELRLKHMRRHEN VIGLLDVFTPDETLD DFTDFYLVMPFMG TDLGKLMKHEKLGEDRIQFLVYQMLKG LRYIHAAGIIHRDLKPGNLAVNEDCELKI LDFGLARQADSEMTGYVVTRWYRAPEV ILNWMRYTQTVDIWSVGCIMAEMITGKT LFKGSDDLQDQLKEIMKVGTGTPAEFVQR LQSD EAKNNMKGLPELEKKDFASILTNA SPLAVNLEKMLVLD AEQRTAGEALA HPYFESLHDTEDPQVQKYDDSFDDVDR TLDEWKRVITYKEVLSFKPPRQLGARVS KETPL

5869	13920	A	666	358	644	RRSLALSPSPECSDVISAHCKLCLPGFTFP SCLSLSSWDYRCPPRLANFFVFLVET GFHRVSQDGLDLLTS*SARLSLPKCWDY RCEPPRPA
5870	13921	A	6660	71	921	
5871	13922	A	6661	2	310	
5872	13923	A	6662	5517	5831	
5873	13924	A	6663	1	625	CKFIRVMAHTRLRLPLRRKKAHLMEIQ VNEGTVAEKLDWARERLEQQVPVNQVF GQDEMIDVIGVTKGKGKGYGVTSRWHK KLPRKTHRGLRKVACKDGLIKNNAST DYDLSDKSINPLGGFVHYGEVTNDFVML KGCVVGTKKRVLTLRKSLLVQTKRRAL EKIDLK FIDTTSKFGHGRFQTMEKKAF MGPLKKDRIAKEEGA
5874	13925	A	6664	1	1261	MSHRKFSAPRHGSLGFLPRKRSSRHGK VKSFPKDDPSKPVHLTAFLGYKAGMTHI VREVDRPGSKVNKKEVVEAVTIVETPPM VVVGIVGYVETPRGLRTFKTVFAEHISDE CKRRFYKNWHKSKKKAFTKYCKKWQD EDGKKQLEKDFSSMKKYCQVIRVIAHTQ MRLPLRQNAHLM*IQVNGGHCGRS WDWPPREGLKQQGTVDPSVLGRNKMID VIGVTQGPKGKGGHPVVWHTQESCP KD/HHPRACRKGHVLGAWHPARVAF SVARAGQKGYHHRTEITKKD/TYKIGPG LSPLFR TAKVIKGTIASTDYDLF*QEASTP PGGFVHYGEVTNDFVMLKGCVVGT KKRVLT LRKSLLVQTKRRALEKIDLK FIDT TSKFGHGRFQTMEKKAFMGPLKKDRIA KEEGA
5875	13926	A	6665	1	168	
5876	13927	A	6666	3	203	
5877	13928	A	6667	3	523	LQFFRRSEVKMKNHLLFWGVLAVFIKA VHVKAQEDERIVLVDNKCKCARITSRIIR SSEDPNEDIVERNIRIVPLNNRENISDPT SPLRTRFVYHLSDLCKKCDPTEVELAD NQIVTATQSNICGWMTPVQSTCYTLSTG NKCYTAVVPLVYGGETKMVETALTPDA CYPD
5878	13929	A	6668	3	276	
5879	13930	A	6669	2	152	
5880	13931	A	667	55	288	PFKKGGFFNGNLPTTFGKLGKFKFPLNL FPGGPPLPHGGLKKGPAPQVPLFLKK PQTSPP*GLREGPPPLKKFYLF
5881	13932	A	6670	1	936	
5882	13933	A	6671	1	1023	
5883	13934	A	6672	106	125	KYLEQCLKHGKSS*HSILQANFFASEND RAKMK*KPCFYKCF*AITFLREDWDYRR EPLRLAYPVYFLTCKIRIMYTHLKDYTG H
5884	13935	A	6673	3	155	
5885	13936	A	6674	3	266	
5886	13937	A	6675	5	160	RDLGSLQPPPPGFK*FSLRLPSPQVQRC CVPSPWLLEQMITAWGASIHNR
5887	13938	A	6676	1586	2220	
5888	13939	A	6677	3	441	
5889	13940	A	6678	1	91	
5890	13941	A	6679	2	226	
5891	13942	A	668	2	385	ARGEPTMELSHADTTNVKAAWGWVGA HAGE*GADVLVRMVLCLPTIWTYFYPFD LSHGCAQVNGHGKKVADALNAVHVH DDMPNSLIGLSELHAH*LLVDPVNFKLL NHCLLGTADHLLDEFTPAV
5892	13943	A	6680	3	187	
5893	13944	A	6681	2	209	

5894	13945	A	6682	2	702	FVSVPSVLLGLQFWRSERD/TARLQSAR WRVERGRLLKELLSRQRPREEVVVGR EVCRTMEVRASLQKIVSNGDEQLEKA MEILRDFEKRPSLLVDCQSSSEISDHSF GDIPASQTNKPSLQLLDPSNTEISTPRPSS PGGLPEEDSVLFNKLTYLGC MKVSSPRN EVEALRAMATMKSSSQYFPVTLVYPN VPEGSVRHLSLLGGGEDVIASSGVELTV NSHCRHAE
5895	13946	A	6683	3	497	
5896	13947	A	6684	1	224	
5897	13948	A	6685	1	789	
5898	13949	A	6686	1	7500	
5899	13950	A	6687	1	8175	
5900	13951	A	6688	3	598	QCGGIRATTMAMSFEPWPQYRFPFFT LQPNVDTRQQLAAWCSLVLSFCRLHK QSSMTVMEAQESPLFNNVKLQRELPVE SIQIVLEELRKKGNLEWLDKSKSSFLIMW RRPEEWGKLIYQWVSRSGQNNSVFTLYE LTNGEDTEDEEFHGLAEKPLLRALQ/CP YSREHKAIEIHCSDGDRGVQVLLGRDLS PFTS
5901	13952	A	6689	2	356	
5902	13953	A	669	787	896	LLYNIYCGEKKREERKD*PGQHGETPSL QKIQLAG
5903	13954	A	6690	2	123	
5904	13955	A	6691	161	464	
5905	13956	A	6692	3	86	
5906	13957	A	6693	3	85	
5907	13958	A	6694	2	201	
5908	13959	A	6695	1	119	
5909	13960	A	6696	1	3414	MEPNDSTSTAVEEPDSLEVLVKTLDST RTFIVGAQMNVEFKEHIRASVSIPSEKQ RLIYQGRVLQDDKKLQEYNVGGKVIHL VERAPPQTHLPSGASSGTGSASATHGGG SPPGTRGPGASVHDRNANSYVMVGTFN LPDSDGSAVDVHINMEQAPIQSEPRVRLV MAQHMIRDIQTLRSRMETLPYLQCRGGP QPQHSQPPPPPAVTPEPVALSSQTSEPV ESEAPPREPMEAEVEERAPAQNPELTPG PA
5910	13961	A	6697	1	441	
5911	13962	A	6698	2	180	
5912	13963	A	6699	1	143	
5913	13964	A	67	1016	1461	VSHSHLSSPQFNHNLNRRPTRIPLSPQPK* GPAYSRPPVWTPAEPEALRWGRHRGP*K ARGSRPSSAHSGWRPRGEAPHRTGTAQP PTAVPCRRHLGEDSTPGPPGALGGVGF PSASP/PVPTPT*TQTGRRPETQLRQQTPR GAPRA
5914	13965	A	670	539	786	SIGRLRRVGHLRSGVRDQPGQHGGTPSL LKIQKFAGHGGAFLYSQVLGRRLRQENRL NSRGGGCSSESGSHYTPAWVTE*DSI
5915	13966	A	6700	2	1069	SLVERLKMAASQAVEEMRSRVVLGEFG VRNVHTTDFPGNYSGYDDAWDQDRFEK NFRVDVVHMDENSLEFDMVGIDAAIAN AFRRILLAEPVPTMAVEKVLVYNNTSIVQ DEILAHRLGLIPIHADPRLFEYRNQGDDEE GTEIDTLQFRLQVRCTRNPAAKDSSDP NELYVNHKVYTRHMTWIPLGNQADLFP EGTIRPVHDDILIAQLRPGQEIDLLMHCV KGIGKDHAKFSPVATASYRLLPDITLLEP VEGEAAEELSRFCSPGVIEVQEVQKKV AQSCPTPRLDTFSREIFRNEKLKKVVRL ARVRDHYIFSVESTGVLPDVLVSEAIK VLMGKCRRFLDELDAVQMD

5916	13967	A	6701	197	310	WLCYIIYK*YDNWWHSMCFSKPLYPEIV SLNYILLKG
5917	13968	A	6702	3	67	
5918	13969	A	6703	3	517	
5919	13970	A	6704	150	840	GSLSPDMANKGPSYGMSREVQSKIEKK YDEELEERLVEWIVQCGPDVGRPDGR LGFPVWLKNGVILDR*TTFTPDASKPV KVPEKPPPCSSSKTEPLPHFLKAAEDY GVRPKSNIFQDL*TSLK GKADMGSSSRGP LMAFGQLWQVTKNVDGHRGADPNWFY ERKPQQHKREFHRRALQKKGKACPLAL PDGAANRRGPPQARH*QGYGTTLGQIHK LEAERAKP
5920	13971	A	6705	3	842	
5921	13972	A	6706	1	570	
5922	13973	A	6707	1	1437	
5923	13974	A	6708	3	286	
5924	13975	A	6709	172	364	FYLVLVMLCFIEPVKLLIVGAYIL*LLKT IHEFHNCQCFVDTKSLKGRHFKEYVFFFTL NMFHR
5925	13976	A	671	24	452	APSPDAMG/HSLWGKVNVEDAGGETLG RLLVVYPWTQRFDSFGLSSASAIMGN PKVKAHGKKVLTSLGDAIKHLDDLKGT AQLSELHCDKLHVDPENFKLLGNVLVT LAIHFGKEFTPEVQASWQKMTGVAS LSSRYH
5926	13977	A	6710	1	683	
5927	13978	A	6711	18	292	
5928	13979	A	6712	1	687	
5929	13980	A	6713	1	119	
5930	13981	A	6714	1	339	
5931	13982	A	6715	3	470	
5932	13983	A	6716	2	2942	TGAPAWPSRRLRDL PAGGMWRLRRAA VACEVCQSLVKHSSGIKSLPQLHLV SRSIYHSHHTLKLQRPQLRTSFQQFSSL TNLPLRKLKFSPIKYGYQPRRNFWPARL ATRLKLRLYLILGSAVGGGYTAKKTFDQ WKDMIPDLSEYKWIVPDIVWEIDEYIDFE KIRKALPNSEDLVKLAPDFDKIVESLSLL KDFFTSGSPEETAFRATDRGSESDKHFRK VSDKEKIDQLQEELLHTQLKYQRILERLE
5933	13984	A	6717	38	359	
5934	13985	A	6718	122	282	
5935	13986	A	6719	2	1010	
5936	13987	C	672	336	728	MGLPKTGHHQHFQPELESSSRIPHAGLS QVQVHFRLGQRCPLRSSQVLLWHLPRK VSTFLPCALT LGVAHGWQRQRTGCQSC QRTSGSMGRQPGAFPGFLLQHLSTFTLP HRLCDSSLVLLCEMTHGRD*
5937	13988	A	6720	326	513	
5938	13989	A	6721	1	1076	
5939	13990	C	6722	11	79	MLPILRHTFLRVTLRGKKACLL*
5940	13991	A	6723	3	198	
5941	13992	A	6724	1	432	
5942	13993	A	6725	123	336	
5943	13994	A	6726	1	227	
5944	13995	A	6727	1	131	MPVLLTSDMHKSSVKAGFAKVDQQA PKSVQLLTVKTRDSTSNRGN SGPRSQAT DRICRTPYHFEDC*SGSTASQVSSASDS EDKRLNK
5945	13996	A	6728	3	364	
5946	13997	A	6729	2	197	
5947	13998	A	673	1	1254	
5948	13999	A	6730	2	421	
5949	14000	A	6731	33	294	

5950	14001	A	6732	2	670	
5951	14002	A	6733	1	171	
5952	14003	A	6734	1	789	
5953	14004	A	6735	3	363	
5954	14005	A	6736	2	379	
5955	14006	A	6737	116	373	
5956	14007	A	6738	1	164	
5957	14008	A	6739	3	122	
5958	14009	A	674	1	921	
5959	14010	A	6740	83	2455	
5960	14011	A	6741	83	2450	IRIAALDDFRTSLTMSSTRSQNPGLKQI GLDQIWDDLRAIGQVYTRQSMASRY MELYTHVYNYCTSVHQVGLLEYKRLK EFLKNYLTNLLKDGEDLMDESVLKFYTQ QWEDYRFSSKVLNGICAYLNRHWVRRE CDEGRKGIYEIYSLALVTWRDCLFRPLN KQVTNAVCLKIEKERNGETNTRLISGVV QSYVELGLNEDDAFAKGPTLTVYKESFE SQFLADTERFYTRESTEFLQONPVTEYM KKAEARLLEEQRVRVQVYLHESTQDELA RKCEQVLEKHLEIFHTEFQNLDDADKNE DLGRMYNLVSRIQDGLGELKKLLETHIH NOGLAAIEKCGEALNDPKMYVQTVLD VHKYNALVMSAFNNDAGFVAALDKA CGRFINNNAVTKMAQSSSKSPELLARYC DSLLKKSSKNPEEALEDTLNQVMVVK YIEDKDVQKQFYAKMLAKRLVHQNSAS DDAEASMISKLKQACGFYTSKLQRMF QDIGVSKDLNEQFKKHLTNSEPLDLDFSI QVLSSGSWPFQQSCTFALPSELSYQRF TAFYASRHSGRKL TWLYQLSKGELVTN CFKNRYTLQASTFQMAILQYNTEDAYT VQQLTDSTQIKMDILAQVLQILLKSKLLV LEDENANVDEVELKPDTLIKLYLGYKNK KLRVNINVPMKTEQKQEQTTHKNIEED RKLLIQAIVRIMKMRKVLKHQQLGEV LTQLASSRFKPRVPVIKKCIDILIEKEYLAE RV/DGEKDTYSYLA TL SGKGLDLCDPQ QIVHVGE
5961	14012	A	6742	3	318	
5962	14013	A	6743	17	174	
5963	14014	A	6744	3	711	LSSCLCGSGKAFGMPTMRLLSFVVLALE AVTQAEEGARLLVSKSLLNRYAVEGRD LTLQYNIYVNGSSAALDVELSDSFPPED FGIVSGMLNVKWDRIAPASNVSHTVVLR PLKAGYFNFTSATITYLAQEDGPVIGS TSAPGQGGMLV\QREFDRRFSPHFLDW AAFGGHDPFPPSGIPLLLWYSSKRKYDT PKTKKNLIWGFHKPSSPKSKAPLPKKP QVLSQTPKGY
5964	14015	A	6745	74	471	
5965	14016	A	6746	1	1371	MAENDVDNELLDYEDDEVETAAGGDG AEAPAKKDVKGSYVSIHSSGFRDFFLLKP ELLRAIVDCGFEHPSEVQHECIPQAILGM DVLCOAKSGMGKTAVFVLATLQQLEPV TGQVSVLVMCHTRELAFQISKEYERFSK YMPNVKVAFFGGLSIKKDEEVLKKNC PHIVVGTPGRILALARNKSLNLKHIKHFIL DEC DKMLEQLDMRRDVQEIFRMTPEK QVMMFSATLSKEIRPVCRKFMQDPMEIF VDETKLTLHGLQYYVVKLDNEKNRK LFDLLDVLEFNQVVIFVKSQRCIALAQL LVEQNFPAAIHRGMPQEERLSRYQQFK DFQRRILVATNLFGRGMDIERVNIAFNY DMPEDSDTYLHRVARAGRFGTKGLAI TFVSDENDAKILNDVQDRFEVNISELPD EIGHLLPTLEQD TVEDSPILGMLTVCSFQ

						GGGTPGWG
5966	14017	A	6747	2	139	AGSELGEGEEVGLSYL/DERTNSEEGGL RGEKRKRDAENDGEEDE
5967	14018	A	6748	3	270	
5968	14019	A	6749	21	301	
5969	14020	A	675	659	1601	SRASSSVVPLALPSLQVTFHPLNEGTLAV ASSMLSSFQPEIGTNATVLGL*PIFLM*VL TSLTISSYLFWL/RGWLSGTTLLEALDCIL PPTRPTDKPLGLPLQDVYKIGGIGTVPVG RVETGVLKPGMVVTFGPVNVTEVKS EMHHEALGEALPGDNVGFNVKNVSVD VRRGNVAGDSKNDPPMEAAGFPAQVIL NHPGQISAGYAPVLDCHTAHACKFAEL KEKIDRRSGKKLEDGPKFLKSGDAAIVD MVPKPMCVESFSDYPPLGCFVRDMR QTVAVGVIAVDKKAAGAGKVTKSAQ KAQKAK
5970	14021	A	6750	4	366	RHRVSLYPSE/WSAVAQTHSSL*P*APWE LK*SF*LSLPSS*K*RSIQLCPG*LRNFFFF/ CGRDGVLMMLVFNSTQVMLLPQPP QVLGLRVELDDTLKVSSLVFLCLKQGY KKRIWNP
5971	14022	A	6751	3	263	
5972	14023	C	6752	54	161	MLPSIQITVEKRMNVFQYSQDAGFSPVNI VFTIGR*
5973	14024	A	6753	161	1122	
5974	14025	A	6754	1	891	
5975	14026	A	6755	2	104	
5976	14027	A	6756	957	1285	HGTRRRRDVIMREFRSRVKVRVLITDL LGSRLMCNNVSLVIN/YMDLPTNREN YIHRIGRGGSNLGGKGVAINFCYLKKTR GFLRDIETFLPILQWRRMPMKCGLTLF
5977	14028	A	6757	1	716	
5978	14029	A	6758	2	835	FLSVLPHSRALLTPKRAPKKKMAJSGVP VLGFFILAVLMSAQESWAIKEEHVIIQAEF YLNPDQSGEFMFDFDGDIEFHVDMAKK ETVWRLEEFGRFASFEAQGALANIAVDK ANLEIMTKRSNYTPITNVPEVTVLTNSTP VELREPNVLCIFDKFTPPVNVNVTWLRNG KPVTTGVSETVFLPRENTLFR/KFHYFP FLPPTEDVYDFRVEHWGLDEPLLKHWE FDAPSPLPKTTENVVICALGLTVGLVGIII GTIFIHKGIRKSNAERRGPL
5979	14030	A	6759	759	1022	PTQGQRKGTSHLGGGADAGCTAAEPPG GTAAASGAGAGRAGD*HPGTGAQHHP PAVPGEAPGEETQGQVQEEPAEAQGWQ PHQPPF
5980	14031	A	676	1	1335	
5981	14032	A	6760	2	689	
5982	14033	A	6761	2	1011	
5983	14034	A	6762	2	151	

5984	14035	A	6763	3	740	RPIGEFRSNADYQYQLLRNCVNDLLKIIQL GLTFMNEQGEYPPGTSTWQFNFKFNLTE DMYAQDSIELLTSGIQFKKHEEEGIETQ YFAELMTSGVVLCEGVKWLFSHSGYD FGYLIKILTNSNLPEEELDFEILRLFFPVI YDVKYLMKISCKNLKGGI/QEVAEQLAE LERIGP/QHQAGSDSLTGMFAFFKMREM FFEDHIDDAKYCGHLYGALGSGSSYVQN GHRGMHMEEGSQQGSPTWK
5985	14036	A	6764	296	522	IWVFHNLKGLFEIFCCILKYFLEELLILF* KTKL*KHASFLKNNPSIQDMESSTTVHRS GLGGSCLADVLSLQWL
5986	14037	A	6765	3	333	
5987	14038	A	6766	1326	1980	TSEASRQSERVDSAALSALLSRSSKCR PWGTARVARAGGCLTPLLSRRFLETRPF TGPWDPGLGVTCWCCPPKRRKSTPRPK FSVCVLGDQHCDEAKAVDATFEVCLG DQVLSNANGFLSLSAKKYDAFLASESLI KQIPRILGPGLNKAGKFPSSLREEGQAIC YSSTNLT*SSLPSQVLCLAVAVGHVKM TDELVYNHLAVNFLVSLK
5988	14039	A	6767	11	713	EAMSSKVSRTDLYEAVREVLHGTQRKR RKFLAETVELQISLKNYDPQKDRFSGT VRLKSHSPALSFSVCVLGD/RQHCD/EA KA\VDIP\HMDNEALEKTSTKNKKLVKK AGQRKYDAVFGPQSLLIKQIPRIPRAPGL NKAGK\FP\SLTHNENMVAKVDEVKIS PIKFQMKKVLCLAVAVGHVKMTDEL VFNIHLA\VNFLVSLK\KNWQKCSGAL YYQEAPMGQSPKRLY
5989	14040	A	6768	2	277	
5990	14041	A	6769	1	336	
5991	14042	A	677	1	811	
5992	14043	A	6770	132	347	
5993	14044	A	6771	3	109	
5994	14045	C	6772	5	160	MGFEGGPKILNWKFKKVXQXSCLXKG QXESIFLNTXKVIRAGDTXKSVLG*
5995	14046	A	6773	52	310	YIIRTQTQISHHPLHYILGSAKKKLCFGKS YFIRGSSFRKGQGHEERGLKYKKKTGEG V**KRTKKQTKTKTKIKYLSRCCGNV
5996	14047	A	6774	149	333	
5997	14048	A	6775	1	1616	LLLLFFLESTRFY*FFFFFFFFFTIQTFKGG PLSPFFLLFFIKPLPQFFFL
5998	14049	A	6776	2	138	ASGHREVQDSYEAYGQDDWNGTITSLK/ APPARPVKGAYREHPYGRY
5999	14050	A	6777	1	1212	
6000	14051	A	6778	3	150	
6001	14052	A	6779	2	1622	ASVATAPALPPPPTAARASVAAASLSRSL DRTSSQMQRDDPAARMSRSGRSGSM DPSGAHPSVRQTPSRQPPLPHRSRGGGG GSRGGARASPATQPPPLPPSATGPDATV GGPAPTPLPPSATASVKMEPENKYLPEL MAEKDSLDPSTHAMQLLTAEIEKIQKG DSKKDDEENYDLFSHKNMKLKERVLP VKQYPKFNFVGKILGPQNTIKRLQEET GAKISVLGKGSMDKAKEEELRKG GDP KYAHLNMDLHVFIIEVFGPPCEAYALMA HAMEEVKKFLVPDMMDDICQEQLFELS YLNQVPEPSRGRGVPRGRGAAPPPPV PTGRGVGPPRGALVRGTPVRGAITRGAT VTRGVPPPPTVRGAFC* RARTAGIQRIP LPPPPAPETEEYGYEDTYAEQSYEGYE GYYSQSQGDSEYYDYGHGEVQDSYEA LWPRTNWNGTRPSLKAPLARPVKGAY REPPYGRLLKTKHEGENISYEQSLLDLFL YLPGIPVALPTDQGNWSKCFFFRGSF SPTLIPFL

6002	14053	A	678	269	561	LSFVGSLSRLFTAGFAECPRFRFRPAPNP RTPSTRNSAPDSQKGATWATAVQAAPR WT*ETGSNPWPTLAAPCSRSPRGPPASFS GGPSASCKLCLK
6003	14054	A	6780	1	76	
6004	14055	A	6781	1	287	CFL*DRVLLCHPGWSAVAHNHSSLQP*T PGIKQFSCRL/SSS*DYRCTSPYLAIFFF *AFFCRKQSLATVPTISNSWPQAILLSWS KHVEITGF
6005	14056	A	6782	3	64	
6006	14057	A	6783	2	69	
6007	14058	A	6784	1576	3458	
6008	14059	A	6786	1	960	
6009	14060	A	6787	507	755	NKRGYKQMEEHSMMLMGRKNQYRKNGH TAQGNL*IQCHPHQATNDFLHRIGKND QVHMEPKKSPHRQVNPKEQSWRHHA T
6010	14061	A	6788	274	882	PDQVDRGGAHWQTDADDPWLADHLQH CQRCGEILRHYSGGIRGNVSAVKCAEHH VPAFARLRNPQCGDFQRLDYRLFDSPGV KRREL*TAYRFCHVAP*LMDLRSGWAA GAVYRYQSH*FTADRLRSVDMDEAGN HHSQQTSDQKIKQRTFSLISGS*TTRTH GHREGNITHRGLSRPNTARILCASKAHL GLPLRSSLP
6011	14062	A	6789	114	329	
6012	14063	A	679	415	1094	SKSRMSAEVIHQVEEALDTDEKEMLLFL CRDVVAIDVPPNVRDLDILTERGKLSV GDLAELLYRVRFDLLKRLKMDRKAVE THLLRNPHLVSDYRVLMAEIGEDLDKSD VSSLIFLMKDYMGRGKISKEKSFLDLVV ELEKLNLVAPDQLDLLEKCLKNHRIIDLK TKIQKYKQSVQAGTSYRNVLQAAIQKS LKDPSNNFRMITPYAHCPDLKILGNCSM
6013	14064	C	6790	1	1983	MGDGTSDFDPIGDIGIRQSNYSCGGCPRI PYVVRVTGRAHGTQTIIVFMAKVYYG NVMRREKDSGGAWGNPWAGILLPPPST RNCTVHSSFSNENIFPQHTSSCVVHNQ YIGADFPWSNFSFVVEYNYVEDSCWTK HCKELNIPYMAFKVILPDTVLERSTLLDR FGGFLLEIQIPYVFFASEGLLNTPDILQLL ESKDMDEAGNHSEQTVTRTENQTLHV LTHRWELNNENTWTQDGEHHTPGPVVG WRELIIAPGVEATALIIRQIADHSLMTSKR DPHEWLDKSWLKVSPSEENRNQISTLSS QSSASDLDVQIEHNEYQYGLGETVQ EDKTTILNDNSSIMELKEISSFLPPVTSYN QTSYWKDSSCKSNIGQNTPLINIESRRP AYNSFLNHSDSESDVFSGLTQMNCETI KSPTDTQKRVSVPFRFINSQKRRTHEAK GFINKDVSDPFSLEGTQSPLHWNFKKNI WEQENHPFNLQYGAQQTACNKLYSQKG NLFTDQKCLSESEGLTCESSKDETFW RELPSVPSLDLFRASDSNANQKEFNSLYF YQRAGKSLGQKRHHESFNSGDKESLTE EKTEAQEKMTTEDRGRGWGYATTNRR MPRIAGNHQEPGERRGTPPPSEAPEGSNP ANTLILDFPPPEL*
6014	14065	A	6791	190	486	FLLHFFLHD*YSSNKLQKVNKSIPPTGPS LCPCVLIVQLPLMSENMRCLVFCSCVSL LRMMVSSFIHVPLNFFNAFLLLNFFRCP LLSCHMIKKSSS
6015	14066	A	6792	1	597	

6016	14067	A	6793	1	721	MTSYNEQNKKPVTDPNEMAIHEDSNQE FKIAVVNETQSRSPRSPTEHLMTPPPLPT REQQPPLTVIFHYLPKSYKTAPPLSPFPDS LFGLSQAPRDMDEAGNHHSQQTKQEQ KTKHCMFSLTSGS*TMRTHGHREGTVIH RGLLGQFSQQLINKSEFSNTVCREKSGR VLQVNMESPL*MIQDALQDQTPKGPIT VFL*LFYLDHLLRSSHKVASYLSTESR GSITVLFIRCSEP
6017	14068	A	6794	417	696	DRNRKANTACFQHSQVGVVEQ*EHMDTG KV*SI*YGNYEHTSTCERMEIQKATTEHL NL*S*SGSFLRFTWKMLQFSKISRSFYQV LKHQQKIM
6018	14069	A	6795	325	1489	RSPTLLMHVHYIKVISWRELLLIWLRAA NASINPGVEQSPSGDPKTVTGFPFLRLA ADWVEEASVPKGVHIALSSQEQRAGDP RDLEAPSNLVISERTHSRFRVSWTPPSDS VDYKVEYYPVSGGKRQEVVVRTPGVPD LRLPAIIPQAAWLLAHLPAAPSAPTELPT KHTEAQSQRCSLLCSVTEVAAPSQV VKEAPPSFHTGTENGYQGEESLFNKAYY GGGTNFFRKESQKLQSSAKKRDAELAN GALGIELNNDYTLKKVMKPLITSNTVTD EIERANVFKMNGKWYLFDSRGSKMTI DENKIPRNPTYKGREGPLQGELOTTAQG NKRQYKQMEEHSMMDRKNQYRENGL TAQAIPQPPPSGI*GYTAPCFPWENLI
6019	14070	A	6796	274	716	QACYITYTEYYAAIKNDEF/TVLCRDMD EAGNHHSQQTVTRTKNQTPHVLTHRWE LNNENTWTQEGEHHTPGPVMLDSAPPTL GHQTPGSSAFGLWDLHQRLRLPRPQTKG STVGPGSEAFKLGLGHYWLSFFPSLQT AYRGTLPFNH
6020	14071	A	6797	1	870	
6021	14072	B	6798	328	2283	MKLEAILSKLTQEKNQTLHVLTHRWE LNNENTWTQGGYHTLGPVDGQKKEE AAIGAILQPLLVIQTVLGVLDLQQTADLQ QRLLEKLTNRKKIAHTVRDHIQREHN SSPAREQNWMENTFDELTVGFRRWVI NSSELKEHDLTQCKKGTMWMMLETIFSK LTQEKNQTLHVLTHKWELNNENTWTQ GGEHHTLGPVWRMFQIYVVAERMLDKI PSLAFGLDLRQWFARGCWSFGHRLKA ARITAPRLAREQNWMEFEKLTTEVVFR RWVITKSKLKEHALTQCKEDKNLEKKEL ATQQKMSSRTASEASSVFTATPHCYHY LSSASYHISGSIRFPVLEKIRLHMGLNK CKVLLSGGSSSQMYGDLEGGWNGKV VFPWSWAVQEPASPPTTLGQISLTVCCST VNGLPASVDVFFCREALPRNLQKFPKAD LGCILLQYIDNLLGYSTAVGCARRMDA LLRHLEDCGYKVSKKKAQICRQQTEGEQ TIRERWIKLSDGRIAVPQLLGAADVAV HKTIHLGQESLEKLLGQYFYISHLPALAK TVAQQCVTCQQRHAKQGPSVPPGIQAY RVASFENLQVDFTEMPKCGDQGLERGST VALVEGTPDHYPDHSYKGRRNPKLD SHSCVKPATAKT*
6022	14073	A	6799	2	472	
6023	14074	A	68	241	492	GGQIMRSGY*DHPG*/HGETRSLKIQKL AGHGGRHL*SQLRRPRLENRLNLGGRG CSEPSSRHCTAAWATE*DSVSKKKKSRR

6024	14075	A	680	551	1706	SKSRMSAEVIHQVEEALDTDEKEMLLFL CRDVAIDVPPNVRDLDLIFT/RERGVLS VGDLAELLYRVRFDLLKRLKMDRKA VETHLLRNPHLVSDYRVLM AEIGEDLDK SDVSSLIFLMKDYMG RGKISKEKSFLDL VVELEKLNLVAPDQLDLEKCLKNIHRI DLKTKIQKYKQSVQGAGTSYRNVLQAAI QKSLKDPSNNFRLHNGRSKEQRLKEQLG AQQEPVKKSIQSEAFLPQSIPEERYKMK SKPLGICLIIDCIGNETELLRDFTSLGYE VQKFLHLSMHGISQILGQFACMPEHRDY DSFVCVLVSRGGSQSVYGV DQTHSGLPL HHIRRMFMGDS CPYLAGKPKMFFIQNY VVSEGPAGEQQPLGGWMGQR
6025	14076	A	6800	1	239	QCCSGGTHGNPAIGDRUMQKQILPWAPA QMKIRFMAPPERKYSVWIAAPILASLSTS SRMWISKQEYDESGPSIVHRKCF
6026	14077	A	6801	2	440	TGIVMDSSDGITHTMPYIEGYTLPHAILP LDLAGQDLTDYFMKILKEGGYSFTTTAE REIMLDIKEKLCYITLDFEQEMATAASSS SLEKS*ELLNGQVITISNQWFHCP/EYLFQ PSFFTSIMKCDVDICKDLYANTVLSGGT TMY
6027	14078	A	6802	2	212	
6028	14079	A	6803	3	443	
6029	14080	A	6804	1	1470	MSTRPRRPPQLGRSTGRARLASRVAAAA GPPGARAPLAGDRAPAAGAPRRAGAGP CRPDPPPPAAGPTRGSPREGGKTGNRGK EREKGRRASLAFADPPPVATRRQLTMD DDIAALVVDNGSGMCKAGFAGDDAPRA VFPSIVGRPRHQGV MVGMGQKDSYVGD EAQSKRGILTLKYPIEHGIVTNWDDMEKI WHHTFYNELRVAPEEHPVLLTEAPLNPK ANREKMTQIMFETFNTPAMYVAIQAML SLYASGRTTGIVMDSGDGVTHTVPIYEG YALPHAILRLDLAGRDLTDYLMKILTER GYSFTTTAEREIVRDIKEKLCYVALDFEQ EMATAASSSSLEKSYELPDGQVITIGNE\ RFRCP EALFQPSFLGMESCGIHETTFNSI MKCDVDIRKDLYANTVLSGVTIMYPG IADRMQKEITALAPSTMKIKIAPS*RK YSVWIGGSILGLALSTFQQMWISKQEYD ESGPSIVHRKCF
6030	14081	A	6805	171	393	GKPKPKPKPLPKPSREISHIP*GL*KAGP FRAPGRPGCKPCWLGPSVGPGR*GCP*K ASPEKVLGENLTLKNP
6031	14082	A	6806	3	264	SRRGSSPAQGS LGRPQLLSAQYKWVGV GGDRVSL*TM DPSLAPKTNRASQSKLD LQPA*APWP/PQLCGHPVPSASCPKSPTF KPT
6032	14083	A	6807	1	632	
6033	14084	A	6808	1	591	
6034	14085	A	6809	783	1516	
6035	14086	A	681	76	158	
6036	14087	A	6810	1	951	
6037	14088	A	6811	122	271	
6038	14089	A	6812	3	132	
6039	14090	A	6813	3	302	
6040	14091	A	6814	2	2158	
6041	14092	A	6815	2	186	

6042	14093	A	6816	1	866	MMEAIAKKMQMLKLDKENALDRAEQA EAEQKQAEERSKQLEDELAAMQKCLKG TEDELDKYSEALKDAQEKLAEKKA DAEAEVASLNRRQLVEEELDRAQERLA TALQKLEEAKEAADESERGMKVIENRAL KDEEKMEQLQEIQLKEAKHIAEEADRKYE EVARKLVIIIEGDLERTEERAELAESKCSE LEEELAKNVTNNLKSLEAQAQEKYSQKED KYEEEIKILTDLKEAETRAEFAIERSVA KLEKTDDLEDELFAQKLKYKALSEEL DHALNDMTSI
6043	14094	A	6817	1	639	
6044	14095	A	6818	1	1710	
6045	14096	A	6819	764	1203	FWLWVSFWVPCNTHHTTSKSTSFSSPSTQ ATRFVGL/WFVIKASIIIGQYCIARERKEFT HPVGRLSCLRQKLYNGTTETVTSWSSNH TERNPFSKFPKLRTVWTHPESHDRWTAP TGLYWICGHRAFAKL PDESAGIGGPKQG AIGIKE
6046	14097	A	682	1	2313	
6047	14098	A	6820	24	225	ARQAQAWFWAWRWAACLWFLVVF *NRY*VSNNKNNIRSLSSLNSSCKF/WS TRQQK*IPKMLS
6048	14099	A	6821	1	1752	
6049	14100	A	6822	110	203	
6050	14101	A	6823	76	353	
6051	14102	B	6824	64	930	MLRSVWNFLKRHHKKCIFLGTVLGGVYI LGKYGQKKIREIQERAAEYIAQARRQY HFESNQRTCNMTVLSMLPTLREALMQQ LNSESLTALLKNRPSNKLEIWEDLKISFT RSTVAVYSTCMLVLLRVQLNIIGGYIYL DNAAVGKNGTTILAPPDVQQYLSIQH LLGDGLTELITVIKQAVQKVLGSVSLKHS LSLLDLEQKLKEIRNLVEQHKSSSWINKD GSKPLLCHYMPDEETPLAVQACGLSPR DITTIKLFHKTEDMLGSPDFRQFLNTCFK PRF*
6052	14103	A	6825	385	666	
6053	14104	A	6826	701	930	VAERQTGTGQGTVDITDRATSM*MRQ RRGCCFATCC/FRHEGVVPWPQGRYHD HEGGFPRARLIHCTPDVLTYPYHVP
6054	14105	A	6827	248	719	TDEPSLLSHTFCPKGALLSACSGACPLSS GTQAGMPPSTEALQPCRGLTVPHQQDK GHRACC/VWKALAADWSVEWQKGRRG LGKALSVTSR/IRATSM*MRQRRGCCFAT CC/FRHEGVVPWPWERYHDHEGGFPRAR LIHCTPDVLT PAISPNVGNSTA
6055	14106	A	6828	1	2489	
6056	14107	A	6829	227	547	FHNKCPRRLES LRQQISIFGMPENHLLKM QILRSAPDSLDFPCAGPLHLGEELLHRV EQVGAEVARVQQDFVL*GDMVEHLPRP GRQAESTPPTVPGNPPETLRRR
6057	14108	A	683	788	926	PSPPELPEGDFEGFFPQKLQ*SCLPTLQKK KNNNNNNNNNNNNNNNEK
6058	14109	A	6830	3	433	
6059	14110	A	6831	37	360	
6060	14111	A	6832	280	1816	
6061	14112	A	6833	3	251	GGALRLHQVPPALPLRGAVSGAAAVQG MSDCTPCCEVHLLQD*VPAGEARVQWH DLGSLQPPPPRFKRFSCILPSSWDYRH
6062	14113	A	6834	3	251	GGALRLHQVPPALPLRGAVSGAAAVQG MSDCTPCCEVHLLQD*VPAGEARVQWH DLGSLQPPPPRFKRFSCILPSSWDYRH
6063	14114	A	6835	2	340	
6064	14115	A	6836	220	412	

6065	14116	A	6837	425	619	
6066	14117	A	6838	1	684	MESQEPTESSQNGKQYIIEELISEGKWV KLEKTTYMDPTGKARTWESVKRTRKE QTRDGVAVIPVLQRTLHYECIVLVKQFR PPMGGYCIESPA\GL\DDGETPRKQLLSR ELEEETGLQRGPLPEC\SLPAVCMGPQAC PNCT\IHIVTV\TPINGDDAENARPKP/KSP GDGEFVEVISLPKNDLLQRLDALVAEE HPHSGTPRVYSYALAL\KHANAKPFEV PFLKF
6067	14118	A	6839	3	194	
6068	14119	A	684	242	437	KSCFFCLIRCYDSLPLPLLLNNFFFLGTES CSVAQAGVRWLNLSSTSGLPGSINSP ASAS*AA
6069	14120	A	6840	1	168	
6070	14121	A	6841	3	191	
6071	14122	B	6842	15	377	MAALCRTRAVAAESHFLRVFLFRPFRG VGTESGSESGSSNAKEPKTRAGGFASAY GAARRSFYRRWSPYRKVEPGRGSPKKC GILCIYAETILPLTTDGTQLQTTKLVHWGT SFIFVENDL*
6072	14123	A	6843	2	205	
6073	14124	A	6844	1260	1628	SFLCLVSCFSNFS*NCSRPFVSLSLKFDFV FVLFCDGVLLCHPGWIAVAQSRLTTAST SR\KRFSCLTIRSSWDYRRPPPCPADFCIF SR\DRGFTMLARLVWNS*PQVICPPPPPK VLGLQA
6074	14125	A	6845	3	629	
6075	14126	A	6846	15	241	
6076	14127	A	6847	93	172	
6077	14128	A	6848	3	82	
6078	14129	A	6849	2	237	
6079	14130	A	685	1	1254	
6080	14131	A	6850	407	529	
6081	14132	A	6851	2	383	
6082	14133	A	6852	1	444	
6083	14134	A	6853	1	279	
6084	14135	A	6854	3	989	
6085	14136	A	6855	1	318	
6086	14137	A	6856	1	397	
6087	14138	A	6857	15	95	
6088	14139	A	6858	3	350	
6089	14140	A	6859	118	325	
6090	14141	A	686	73	1553	PLKAKMGKEKTH\NIVVIGH\VDSGKST TTGHLIYKC\GGNDKRTIEKFEKEAAEM GKGSFKYAWVLDKLKAERNRGITIDISL WKFET\SKYYVTYPFDAPGH\RDYFPKT WITGDIFRLDWFGGPPFWGGSPLIVAAG\ VGEFEAGYLPRNGADPERHALLAYTLG CETTKLSGVNKNNGIPLEPTPTAQKKILKEI VKGKSALTLRKIGYNPDTSSILCPISGWN GDNMLEPSANMPWFQGDGKVTRKDG NASGTTLLEALDCILPPTPTDKPLGLPL QDVYKIGIGITVPVGRVETGVLKPGMV VTFGPVNVTEVKS\VEMHHEALGEALP GDNVGFNVKNVSVKD\VRGNVAGDSK NDPPMEAAGFPAQVILNHPGQISAGYAP VLDCHTAHIACKFAELKEKIDRRSGKKL EDGPKFLKSGDAAIVDMVPGKPMCVESF SDYPPLGCF\VRDMRQTVAVGVKAVD KKAAGAGKVTKSAQKAQKAK
6091	14142	A	6860	1	135	
6092	14143	A	6861	1009	1140	
6093	14144	A	6862	3	416	
6094	14145	A	6863	4	252	

6095	14146	A	6864	3	130	
6096	14147	A	6865	1	1590	
6097	14148	A	6866	1	595	GTRRLAPTAQRKRDENQSVKPEPGRGAS VRGGNLQTLPAAGDFTLCPASRDFRRVP AGQTQVPAAETA VEPVPAVVAGARGGR VMSEPQPRGAERDL YRDTWVRYLGYAN EVGEAFRSLV PARVVWLSYGVASSYVL ADAIDKGKE/ELERCPALEASRSARVTVA VVDTFVWQALASVAIPGFTTNRVCAASL YVLGT
6098	14149	A	6867	2	453	
6099	14150	A	6868	1	265	
6100	14151	A	6869	46	194	
6101	14152	A	687	67	408	KAAGKRGDFKTEGAYQRQRTIFKNKKR ARREKTGRENLRGNYKNMGRGLKTPRG ALGGPYLDKKGPLRGKGPFGGTLSSS PKIKIQGTL*IRRNYWPYIRRYNRFKKRQ KNM
6102	14153	A	6870	4	228	
6103	14154	A	6871	1	288	
6104	14155	A	6872	1	885	
6105	14156	A	6873	532	687	
6106	14157	B	6874	158	3331	PRPPAAGEAQAADMNHQQQQQQQKA GEQQLSEPEDMEMEAGD TDDPPRITQNP VINGNVALSDGHNTAEEDMEDDTSWRS EATFQFTVERFSRLSESVLSPCFVRNLP WKIMVMPRFY PDRPHQKSVGFLLQCN ESDSTWSCHAQAVLKIINYRDDEKSFSR RISHLFFHKENDWGFSNFMWSEVTDPE KGFIDDDKVTFEVFVQADAPHGVAWDS KKHTGYVGLKNQGATCYMNSLLQTLFF TNQLRKA
6107	14158	A	6875	589	732	
6108	14159	A	6876	1	799	
6109	14160	A	6877	2	470	
6110	14161	A	6878	3	204	
6111	14162	A	6879	367	551	EHSTLKLPHYHTQEAGAAPGPTGTD SHEV DHLEGGAGKEAGPCA*SLGTMVAPVRS NSGSPE
6112	14163	A	688	10	386	AGAAAIGEPMA*RGEGHPPWSVDERAD STNVNNWHWTERDASHWSTDKLKTLFL AMHVQNEERNGEATEVSKLDGEASINN RIGKLMFFYEWGVTL DWTGAS*SGVPY KGHVEIPYLADENCVDE
6113	14164	A	6880	24	547	
6114	14165	A	6881	1	828	
6115	14166	A	6882	2	270	
6116	14167	A	6883	2	114	
6117	14168	B	6884	75	293	MPSIKLQSSDGEIFEVDVEIAKQSVTIKT MLEDLGMDDEGDDDPVPLPNVNAAILK KVIQWCTHHKDDPPSS*
6118	14169	A	6885	446	639	

6119	14170	A	6886	3	1503	ARQRRSRAPTTHTHRALVRLFSGSQSAP PPPPRSPPSAAMSTRSVSSSYRRMFGG PGTASRPSSSRSYVTTSTRTYSLGALRP STSRSLYASSPGGVYATRSSAVRLRSSVP GVRLLQDSVDFSLADAINTEFKNTRTNE KVELQELNDRFANYIDKVRFLQONKIL LAELEQLKGQKSRLGDLYEEMRELRR QVDQLTNDKARVEVERDNLAEDIMRLR EKLQEEMLQREEAENTLQSFQDQVDNAS LARLDLERKVESLQEEIAFLKKLHEEEIQ ELQAIQEQHVQIDVDVSKPDLTASLRD VRQQYESVAAKNLQEAEEWYKCQVC* PLLRASNRN\NEPLRQAK\QES\TEL PENR VQSLTC\EV DAL*RKPMSSLER\QLREME ENFC\AVKAANYPRPLLARL\QDEIQNY* RREMASLTFVEYQ*PALNVKMAP*HLRF ATLQE/MLLGRRGERGFPLASFPNFSLP* TLRGNLIWDSLPSGLIPHSKRDTs
6120	14171	A	6887	3	232	
6121	14172	A	6888	252	384	
6122	14173	A	6889	3	196	
6123	14174	A	689	2	323	REMDLQVHNAMDQLEQRVSEFFMNAK KNIPEWREEQMASIKKDYYKALEDADE KVQLADQIYDL/RSLELDTPSQPVNNHH AHSHTPAEKRYNPTSHHTTTDHIPEK
6124	14175	A	6890	1	2994	
6125	14176	A	6891	75	350	TGIPVNSYRVKINWYTLQFVSLFRPFG VINNLADQSESEGPVQESAEPQLAEP ATEEIKETDGSSQIKQEPDPTWETSLLG EISF
6126	14177	A	6892	1	2935	
6127	14178	A	6893	214	301	
6128	14179	A	6894	1	2879	MAQVAMSTLPVEDEESSES RMVVTFLM SALESMCKELAKSKAEVACIAVYETDVF VVGTERGRAFVNTRKDFQKDFVKYCVE EEEKAAEMHKMKSTTQANRMSVDAVEI ETLRKTVEDYFCFCYKALGKSTVVPVP YEKMLRDQSAVVVQGLPEGVAFKHPEN YDLATLKWIGENKGGISFIKRPFLPKK HVGGRVMVTDADRSLSPGGSCGPIKVK TEPTEDSGISLEMAAVTVKEESEDPDY QYNIQ
6129	14180	A	6895	1	334	
6130	14181	A	6896	3	444	
6131	14182	A	6897	117	1009	
6132	14183	A	6898	5	808	LPLPGRAVWCTHCCAPTSPGPVLP MSFLKSFPFPPGPAEGLLRQPDTEAVLN GKGLGTGTLIAESRLSWLDGSGLGFS EYPTISLHALSRDRSDCLGEHLYVMVNA KFEEESKEPVADDEEDSDDDVEPITEFR FVPSDKSALEAMFTAMCECQALHPDPED EDSDDYDGEEYDVEAHEQGQGDIFTFY YEEGLSHLTAEQ\QATLERLEGMLSQSVS S\QYNMAG\VRTEDSIRDYEDGDGRD TPTVCLGQFEDADV
6133	14184	B	6899	233	411	XALNGLSAQDNWAKLQRDYDALITNY YLWPAVQLANFYLVPLHYREDPASTTLV SDPT*
6134	14185	A	69	709	941	SQHFERSGDQHHPGQHGETLSLLKMOK LAGCGGMRL*SQL\LGRLRQENLLNPGG RGCSKPRSHHCTPAWVTQQDSIS
6135	14186	A	690	2	495	AKKNKPEWREEQMASIKKDYYKALEDA \DEKVLLSNQIYDLVDRGGRKLDQELAK FKMELEADNAGITEILERRSLELDTPSQ VNNHHAHSHTPVEKRYNPTSHHTTTD HIPEKKFKSEALLSTLTVRCLLRENTLGC RUNNNSTASSNNAYNVNSSQPLGSYN

6136	14187	A	6900	109	435	
6137	14188	A	6901	34	408	RQWLQEEAYITKEQKYSFLHDSQTSFCF SDSIPTSSNMEETQQ/KSNLELLHISLLLN QSRLEPVRFLRSTFTNNLVYDNSDSDY QLKDLLEGGIQMLMGRLEAATN*LGGP QANYNKFDKTRTT
6138	14189	B	6902	80	495	XPGSRTSLLAFALLCLPWLOEAGAVQT VPLSRLFDHAMLQAHRHQLAIDTYQEF EETYPKDKQKYSFLHDSQTSFCFSDSIPT SNMEETQQKSNLELLRISLLIESWLEPV RFLRSMFATTWCMTPTAMTITS*
6139	14190	A	6903	1	597	
6140	14191	A	6904	3	552	
6141	14192	A	6905	3	716	
6142	14193	A	6906	359	648	WIPRPNSPNHSGSCGQAHLVAMAPGSRT \SLLAFALLCLPWASRRLGAVPKPFRIS RLFHDHAMLQAHRHQLAIDTYQEFEE TYIPKDKQKYSFLA*PQTSFCFSDSIPTPS NRRITQQKSNLELLRISLLIESWLEPV RFPQEYCSANNLGVLTPTAIDYHLLKD LEGGHPTV*WNICREVCFSACFSRGIRDD IEEEDDQEA YFRYMAENPTAGVVQEEEE DNLEYDSDGNPIAPTKKIIDPLPIDHSEV DQHGLRPEGTHLTLKERTSWVESVADTL CTILTTLVMDPKAQLPEPLRVLWTGSPS GNGSRLPDVPCSWLLPCSACPLQGGW VPCQNRSVYPGFFDHAIAPSPSRAPAGH CTPTRSLKKPHIPKDKQKYSFLA
6143	14194	A	6907	113	411	
6144	14195	A	6908	3	1162	
6145	14196	A	6909	2	265	
6146	14197	A	691	50	391	GSQKIAPVFWSGFECDSERLTDLESWLY ILPATQPWSLTYFYFQFSFILTFRLYDKLF FFFTLYLYLNLYFFLYVFLFIV*ICIFCYIY LVFIFKCVV*FFIFFVCFMLFFL
6147	14198	A	6910	3	151	
6148	14199	B	6911	58	359	SLAALQAYSHWLAQYCSEVHRQNTQQF VTLISTTMDAITPLISTKVQDKLLSACH LLVSLATTVRPVFLISIPAVQKVFNRTDA SALRLVDKRMSSSGP*
6149	14200	A	6912	4	329	
6150	14201	A	6913	2	256	
6151	14202	A	6914	1	350	

6152	14203	A	6915	257	2659	VDCRMS/FSYIEKFTDFLRLFVSVHLRRIE SYSQFPVVEFLTLLFKYTFHQPTHEGYFS CLDIWTLFLDYLTSLIKSRLGDKEAVLN RYEDALVLLLTEVLNRIQFRYNQAQLEE LADDETLDDDQQTWQRYLRQSLEVVA KVMELLPTHAFSTLFPVLQDNLEVYLGL QQFIVTSGSGHRLNITAENDCRRLHCSLR DLSSLLQAVGRLAEYFIGDVFAARFND LTVVERLVKVTLYGSIKLYNIETAVPSV LKPDLIDVHAQSLAGGCRLSAHLAQY CSEIHRQNTQQFVTLISTTMDAITPLISTK VQDKLLLSACHLLVSLATTVRPVFLISIP AVQKVFNRTDASALRLVDKAQVLVCR ALSNILLPWPNLPENEQQWPVRSINHAS LISALSRDYRNKPSAGAPQRKMPLDDT KLIIHQTLQRLRKILWENISGÆSTKSSTDF AYQFGCRESVQVSLGLFPAFIHQSDVT DEMLSFFLTLFRGLRVQMGVPFTEQIIQ TFLNMFTRQLAESILHEGSTGCRVVEKF LKILQVVVQEPGQVFKPFLPSIALCMEQ VYPILAEPSPDVKAELFELLFRTLHHN WRYFFKSTVLASVQRGIAEEQ MENEPQ FSAIMQAFGQSFLQPDHILFKQNLFYLA TLNTKQKLYHKKUFRVTAMLFQFVNL LQVVLVHKSHDLLQÆEIGHRHSYNMAS VDFDGFFAAFLPEFLTSCDGV DANQK SVLGRNFKMDRVRRERGRAKRRAEWA RKPGTCAARRGHIEASGRGLCPPCSLAA AHEMPADLVL
6153	14204	A	6916	1	321	
6154	14205	A	6917	1	259	
6155	14206	B	6918	1	3045	MPDCTSKCRSLKHALDVLSVVTKGSEN QIKAFSSH CYNAATIKDVFRNALHLV SSCGKKGVLDWLIQKGVDLLVKDKESG WTALHRSIFYGHIDCVWSLLKHGVS LYI QDKEGLSALDLVMKDRPTHVVFKN TGC LLDPNGEKC VTAPRQVSALHHKDIALSL VAASDGATVCVTTRGDIYLLADYQCKK MASKQLNLKKVLVSGGHMEYKVDPEHL KENG GQKICILAMDGAGRVCWRSVNS SLKQCRWAY
6156	14207	A	6919	1	1149	
6157	14208	A	692	3	546	PAPPGRVFAAWPGSEEARVLVVLKGCA CRAGL FKMYP LLPMT EVC TKSSTVTWF CFAAYESLFETPFSAIGSVLVPSWGLTL ALS*VCFAAFA*LLASLFSQDPLVSPSAA MWASPACFCAEPSSAAIGVSSPSSSVFTQ QS**GSPLAGSASASAKNMARARSVAPP RNGRPGNTNADS

6158	14209	A	6920	426	2967	HSAPPAVLRGGMSEAGGAGPGGCGAGA GAGAGPGALPPQPAALPPAPQGSPPCAA AAGGSGACGPATAVAAAGTAEGPGGGG SARIAVKKQAQLRSAPRAKKLEKLGVYSA CKAEESCKCNGWKNPNPSPTPPRADLQQ IIVSLTESCRSCSHALAAHVSHLENVSEE EMNRLLGIVLDVEYLFCTCVHKEEDADTK QVYFYLFKLLRKSILQRGKPVVEGSLEK KPPFEKPSIEQGVNNFVQYKFSLPAKER QTIVELAKMFLNRINYWHLEAPSQRRLR SPNDDISGYKENYTRWLCYCNVPQFCDS LPRYETTQVFGRTLLRSVFTVMRRQLE QARQEKDKLPLEKRTLILTHFPKFLSMLE EEVYSQNSPIWDQDFLSASSRTSQLGIQT VINPPPVAGTISYNSTSSSLEQPNAGSSSP ACKASSGLEANPGEKRKMTDSHVLEEA KKPRVMGDIPMELINEVMSTITDPAAML GPETNFLSAHSARDEAARLEERRGVIEFH VVGNSLNQKPNKKILMWLVGLQNVFSH QLPRMPKEYITRLVFDPKHKTALIKDG RVIGGICFRMFPSQGFTEIVCAVTSNEQ VKGYGTHLMNHLKEYHIKHDILNFLT ADEYAIGYFKKQGYCKEIKIPITKYGGYI KDYEGATLMGCELNPRVPTNEFSVIKK AE/EGIIKKLIERKQAQIPKKFTLGLSCFK DGVRQPIESIPGIKKA\GWNPSGKEKSKE PRDPD\QLYST\KLSILQQVKSHQSAWAF MEPVKRTEAPGYEVIRFPMDLKTMSE LKNRYVYVSKKLFMADLQRVFTNCKEYN AAESEYYKCANILEKFFFSKIKEAGLIDK
6159	14210	A	6921	1	184	
6160	14211	A	6922	114	384	
6161	14212	A	6923	141	1741	
6162	14213	A	6924	1	153	
6163	14214	A	6925	1	200	
6164	14215	A	6926	2	242	
6165	14216	A	6927	132	251	
6166	14217	A	6928	132	251	
6167	14218	A	6929	2231	2578	PLPPGSRTLHWMAPDEEDFRIGN*TMNA IFFFLFLFFFFFFFLRQSFALVVQAGVQW HDLSSLQPPPPRFK*FSCSLPSGWD*RH APPRPAIFVFLVEMGFHHVNQDGLDLTT W
6168	14219	A	693	3	389	DAWVDPRFRLIFLKTITGKTMAVDLEPN DTIANAKA*IQDKEGIPPDQRLIFAGKQ LENGRTLDPDYIIHKESTLLVRLKGGMQ IFVKTLTA*TISLQAEPSDTIHNV*EKIQD KESIPPDQHTVIL
6169	14220	A	6930	2	94	WRDLGSL*PPPPGFKRFS*LSLKSHPNVT S
6170	14221	A	6931	130	295	GIISNADFVSFFFF*DGVFALVAQAGVQ WRGLGSLQPLPPGFKRFSCLSLPSTW
6171	14222	A	6932	3	403	TYKILDFIVNSIRHRRGTFRPGHTEVTS MTLDFIGAG*/SNLQ*PAST*PGDQY*I*L LQST*NYVLHKFQLPTWKGRSEISEQAV SAKEKT*KS/T*LALVK*ARTLESNWPGL *ILILISLSCMIWTNDSNLF
6172	14223	C	6933	78	335	MWSPLTKEIFSCPTPQTCGAFKGTILKRA PXXXXXXXXXVKIGXXXXXXXXXXXXXX XVSPRPLSARVLAPCLGCDFFVSFNRTTV WK*
6173	14224	A	6934	1	143	
6174	14225	A	6935	1	1676	
6175	14226	A	6936	1	161	
6176	14227	A	6937	61	742	
6177	14228	A	6938	7	238	
6178	14229	A	6939	1	213	

6179	14230	C	694	70	225	MNIQYIQHESVYQNVRSQRESTGRWSH CCPSQGRSRRIPFTVEEIQQHGV*
6180	14231	A	6940	1	257	
6181	14232	A	6941	3	279	GSGWDGRGQSGRVADSS*ARVLSALRE VNKRLQDLRSCLSPKPPQGQEQGQED EVVLVEGPTLPETPRLFLKIRCRADLVR LPLRMVSA
6182	14233	A	6942	73	816	
6183	14234	A	6943	1	484	
6184	14235	A	6944	1	1758	
6185	14236	A	6945	1	1420	
6186	14237	A	6946	186	209	QLWPN*LLSRNKEATLRYSQLPTCHSICY *MPAF*HTISDLSFNKNINCKSYHLRVFY KYV*IVCHF*VPKVYWKYYQTSCT*W R*SGVE*PPISSSSSACCLLRRLPTEGTCP EIFWNPRLGISAECDSCGFTSF
6187	14238	A	6947	2	2948	
6188	14239	A	6948	1	616	
6189	14240	A	6949	1	1913	
6190	14241	A	695	277	396	EAP*HPDFIKNMITGTS*ADCAGLIVAAG GGVFKSWDLQK
6191	14242	A	6950	3	185	
6192	14243	A	6951	112	569	
6193	14244	A	6952	1	1210	
6194	14245	A	6953	75	333	
6195	14246	A	6954	271	512	GAVGRPRSQQKSIGVPGWVSPGF*ECGK RRMTFVLLKHIMLLFPARFQQIMRNIPRR LAEHMQQPLFSSCPSLMRAFEVT
6196	14247	A	6955	2	184	
6197	14248	A	6956	13	163	
6198	14249	A	6957	627	847	
6199	14250	A	6958	3	144	
6200	14251	A	6959	1	2008	PAAADARRPRSAPATMRPKAFLLLLLL GLVQLLAVAGAEGPDEDSSNRENAIEDE EEEEEDDDDEEDDLEVKEENGVLVLND ANFDNFVADKDTVLLEFYAPWCGHCKQ FAPEYEKIANILKDKDPPIPVAKIDATSAS VLASRFDVSGYPTIKILKKQAVDYEGS RTQEEIVAKVREVSQPDWTPPEVTLVL TKENFDEVVNDADIILVEFYAPWCGHCK KLAPYEKAAKELSKRSPPIPLAKVDAT AETDLAKRFDVSGYPTLKIFRKGRPYDY NGPREKYGIVDYMIEQSGPPSKEILTLKQ VQEFLKDGDVVIIGVFKGESDPAYQQY QDAANNLREDYKFHHTFSTIAKFLKVS QGQLVVMQPEKFQSKYEPRSHMMDVQ GSTQDSAIDFVLKYALPLVGHKVSND AKRYTRRPLVVVYYSVDFSFYRAATQ FWRSKVLEVAKDFEYTFIAIDEEDYA GEVKDLGLSEGEDVNAAILDESGKKFA MEPEEFDSDTLRELVTAFKKGKLPVIK SQPVPKNNKGPVKVVVGRTFDSIVMDP KKDVLIEFYAPWCGHCKQLEPVYNSL AKKYKGQKGLVIKMEAPANDVPQRP AIRVEGFPTIYFRPPVGDKKDPS/VKFEG GDARDLEPFEPFIEEHATKLSRTKEEL
6201	14252	A	696	549	707	SQNFWRPMWADHLRLGVRDQHGQHGE TPSLKIQKLAGHGGGRL*SQLVRKLR
6202	14253	B	6960	137	214	ASQFPIEWRPVKDAATVDSEPALPQQ*

6203	14254	A	6961	1	625	PSLKGQKLELHRGAAALELVDPPGCRSG LVHARGCTYSQWRSRSHPFCCSRGPLA MAGILFEDIFDVKDIDRKAKKFDRVSRL HCESESFKMDLILDVTIQIYPVDLGDKFR LVIASLTIEDGTLDDGEYNPTDDRPSRA DQFEYVMYGKIVYRIEGDAETSTEATR LSAYVSYGGLLMRLQGDANNLHGFEV DSRVYLLMKKLAF
6204	14255	A	6962	1	273	
6205	14256	A	6963	135	233	
6206	14257	C	6964	198	449	
6207	14258	A	6965	1	1278	
6208	14259	A	6966	1	325	
6209	14260	A	6967	525	661	TEILSGSLGSEIFTTSES*RPGLGPSFVIFLF SSSVCLNIFFRVL
6210	14261	A	6968	1	293	MAGTPPPALLPPCSLISDCCANNQRDSV GVGPSEPGAGYNLVVRSFSLPSEKRSVR VGVTRLFQGRPSPLSLTQKGNPLTPCAS QFTSTISDGRIMV
6211	14262	A	6969	1	1372	
6212	14263	A	697	82	417	AFQEMELKRPQEEDVAALPEGMRPHSN LYGFSWE*VICAADVGLFAALFFLWRSF RTVRIRIHVGRERKLALMLSGLNQ*KSEL LGHCILAQNEYDGYELDE*FVDLRVDKE
6213	14264	A	6970	2	277	KNEMTLDAYIFLADMAAYQQEEQMQLP RADAIRSLIDTFSLIEHLQGLSQA VPRH TIRELLGQQPISSLI*I*DSYPHPLHLRVEN SGEV
6214	14265	A	6971	434	563	ETTFYNEQRGPQPHLPEVKKKYRGN*EA KTK*LRPENWKGDIL
6215	14266	A	6972	197	1247	ALVRLDSWMGLNTTANLGGGMTEMAR GVTPWICPRSSAERARSGIPAMVPISVK ISGPQLLIGNPPGSTKRWARNSSCSSEH CR/SQGAQEECLAQHH/TPSAPSQMT*T PNC*CAGAPLAAVHR/GITQRQCMNEVQ VAHMPPTLP*ETGDHNAELSGAPAIYLP QGAQHSPVH*DQLL*FPIS*TY*EPTKLQ DLLRTKSPGGTPQLFCFAH/ALPAVPQAQ VLGLLQIMSGSPQSLRAPSLQSLQTRLL GMSLVHLHNLAAQVLEDPQQLVAPP/T/D YQGCFLGSKLWLPQLSN/VCSAPSSAAF LEAAPGSLDPRPPGFVPSLPGLPGGGGS VPAALFELFAPAPPPT
6216	14267	A	6973	232	476	IFVSSYYHVNLFRRFT*AHSSSH*TNPD LYPYQHGNKVKDIPGTLPENRKVG*PL KKDLQDENKQDKPSCHLQGLQWP
6217	14268	A	6974	442	698	
6218	14269	B	6975	546	1820	LLLCPLFCYGLTSVLHVTCFFSHHGY DTSKDNGAKQPKDEIDAEDATDFRH LPDVLKQCIPMIQASQPADSAVPATSGK VYGTPELTPTNIEAAPLAEHHA TSITECDKLSSFATSVAEQSVASLTAPQ TEETGKSSLLDVTVSIPSSRTEATQGLD YVPSAEDKGFKSPCEDFSVTGESEKRG EIGKGLSGERAVEEEEEETAHVEMSEKL CSQYGTVPVSAPGHALHPGEPALGEAEE RRLSPDDSTVKMASPAPSGPPSGHTPFH ESPVEEKSEPQDFQEADSWGDTQRTTSV GKRKAAEELRCLVRTGRSIRGLSLPPACT RAERREVERVVVDALSGLKGDLAGRY RLSEMTEAEQQQLIDDHFLFDKPVSPLLT AAGMARDWPDARGIWHNNEKSFLIWW N*
6219	14270	A	6976	2	480	
6220	14271	A	6977	1	2043	
6221	14272	A	6978	1259	1497	

6222	14273	A	6979	2	425	
6223	14274	A	698	751	1063	FYQDKRHQPGIVAAACNPFGRSRQEDLL RS*VGDQPGQHSESPSMQKI*KLAGHGG AHV*S*LLRRPRQDNPLSPGGQGCSVL*S HHCTPAWATQGDPGSKSKN
6224	14275	B	6980	259	329	XFRKKEQIQKQCKGTAGQALIKE*
6225	14276	A	6981	1	1251	
6226	14277	A	6982	1	421	
6227	14278	C	6983	120	371	MSAHSHPCTCINGHTPVSITYXXXXXGG PFKRTLGGPKFNGGGQGKIFFFMGGLFK PSLGFLEKNLFXXXXTYGATPPPKFKP*
6228	14279	A	6984	76	251	ALKFCRGVFIPIFPPQKKFLFQNSPGGFF PPLKEKNFSFPP*KSSSPPKPLNFVGGFF FFPPP/NKKFLFQNSPGGFFFPPLKEKNFS FPPPVKFGPPQGSF*TPPP
6229	14280	C	6985	193	315	MGGQLKPSLGFLEKNLFFGGEKNHXX XXKFKPLGXXXXF*
6230	14281	C	6986	363	413	
6231	14282	A	6987	1	1088	
6232	14283	A	6988	64	1279	LAPGAVGKGRGHTLPCSAARMGVKAS QTGFVVLVLLQCCSAYKLVCIYTWSQ YREGDGSCFPDALDRFLCTHIYSFANIS NDHIDTWEWNDVTLYGMLNTLKNRNP NLKTLISVGGWNFGSQRFSKIASNTQSR RTFIKSVPFLRTHGFDGLDLAWLYPGR RDKQHFTTLIKEMKAEFIKEAQPQKKQL LLSAALSAGKVTIDSSYDIAKISQHLDFIS IMTYDFHGAWRGTTGHHSPFLRGQEDA SPDRFSNTDYAVGYMLRLGAPASKLVM GIFTFRSFTLASSETGVGAPISGPPIGR FTKEAGTLAYYEICDFLRGATVHRTLQ QVPYATKGNQWVGYYDDQESVKSQVQY LKDRQLAGAMVWALDLDQGSFCGQ DLRFLPTNAIKDALAAT
6233	14284	A	6989	3	174	
6234	14285	A	699	3	17	
6235	14286	C	6990	116	181	MCSTSRSRFTNLKSCNLLKY*
6236	14287	A	6991	20	111	
6237	14288	A	6992	120	426	
6238	14289	A	6993	2	112	
6239	14290	A	6994	24	316	FLFLFFETESCSVARLECSGAISAHCKLC LPGSRHSPASASSQVAGSTGACHQA/QA NFVFLVETGFYRVSPG*SG/LSLELVIR PPRPPKVLGLQV
6240	14291	A	6995	80	326	
6241	14292	A	6996	1	233	
6242	14293	A	6997	1941	2223	RTPRMKQSPAPIPCQPTTCSGCMASRAT RTGWTSVCAYCRLFRAHAICVPVALPE MVRALSAQQTLKQIVICGDRQAKDTK ALGAVRPLCLHS
6243	14294	A	6998	211	544	
6244	14295	A	6999	31	230	
6245	14296	A	7	46	1069	ESKHGNFFWVIFLCYCTKEERTQLQKQK TDEYFRMKLQWKSISQEQEKNRSLRD YRSLIEKDVNRTDRTNKFYEGQDNPLI LLHDILMTYCMYDFDLGYVQMSDFFS PFLYVMENEVDFAWCFASYMDQMHQN FEEQMGMKTQLIQLSTLLRLDSGFC YLESQDSGYLYFCFRWLLIRFKREFSFLD ILRLWEVMWTELPCTNFHLLCCAILSE KQQIMEKHYGFNEILKHINELSMKIDVE DILCKAEAISLQMVCKELPQAVCEILGL QGSVAVTTPDSVVG*RTKMLVNDLFGPT VCISKVTALPTLSASGARNDSPQIPVSS RCLQD

6246	14297	A	70	170	340	TDSALGSPCLHPTALCAVCGTA*SST/GL VALALMRLEILKSSVPAVMAGIITYNL
6247	14298	A	700	3	443	
6248	14299	A	7000	1	861	
6249	14300	A	7001	55	406	
6250	14301	A	7002	1	361	
6251	14302	A	7003	1	1725	
6252	14303	A	7004	1	1271	
6253	14304	A	7005	3	329	LIKLCCKSAKSCENDLEMGMLNSKFKKT RYQAGMRNSENLTANNTLSKPTRY/QGE LKEIKQDISSRLRYELLEKSQATGELADLI QQLSEKFGKLNKNDHLRVNKGKDI
6254	14305	A	7006	1	801	
6255	14306	A	7007	21	373	
6256	14307	A	7008	3	63	
6257	14308	A	701	147	437	WYVKKERKKERKQERKKERKKERKKE RKKRKRRERKKER*RRERERGRKEGRKE GRKEGRKEGRKEGRKKGRREGREKERE RKKEREEISREYDSEK
6258	14309	A	7012	1	521	MSSKRTKTKTKRPPQRATSNVFAFMDQ SQIQEFKEAFNMIDQNRDGFIDKEDLHD MLASLGKNPTDEYLDAMMNEAPGPINF PQWFSPMLVRSLNAPDPENVRNAFACF DEVEAPGPIQEDYLRELLPTMGDRFTNEE VDELHREAPIDKKGNFNYYIGFTRILEHG AKDKDD
6259	14310	A	7013	106	693	TTTMSKKAKTKTKRPPQRATSNVFA MFDQSQIQEFKEAFNMIDQNRDGFIDKE DLHDMLASLGKNPTDAYLDAMMNEA PGPAINSTMFLTMFGAEKFKSHRSPEDVI/ RANGLCFCSDDEEATGHFPQED/YTLRELL TNPWGDARFPDGGKWMNLYQRKHLIGP KKGEFSNYIGVHHGILTGRPPKHKDDLK ELLA
6260	14311	A	7014	78	188	
6261	14312	A	7015	2	93	GGSCS*SQHFGRPRWADHEVRRSRPSWL TR
6262	14313	A	7016	2	93	GGSCS*SQHFGRPRWADHEVRRSRPSWL TR
6263	14314	A	7017	2	93	GGSCS*SQHFGRPRWADHEVRRSRPSWL TR
6264	14315	A	7018	2	93	GGSCS*SQHFGRPRWADHEVRRSRPSWL TR
6265	14316	A	7019	2	94	GGSCS*SQHFGRPRWADHEVRRSRPSWL TR
6266	14317	A	702	505	637	CLLLNSIYRRHQGR*DGKERKKDRKKE RKKERKKERKKERKKERKKE
6267	14318	A	7020	1	418	RRLRTAMKLRSRHPDQTDQYQYKA HLGAALQANPLGGAHAKGIVLEKVRV EATQPKSAIMK/CVRVQLIKNGKKITAF VPNDGCLNFIENDEVLVAGFGRKGHAV GDIPGVRFKVVKVANVFILALYKGKKER PRS
6268	14319	A	7021	2159	2334	SATNYRNLTVLELGNSTHRHSHKTNST* KNCTRIPTSQLNK*VKKHQSHICQSNCP F
6269	14320	A	7022	1748	1821	
6270	14321	A	7023	2179	2485	
6271	14322	A	7024	3	502	TARAWLLGPVWPCVSEWWSKKPSPRG GRDPSDRDPAFAARSTVPPRISAYERPV PWPGEWNPGRGPGRASAVVSPREGNW GVLDPRLQARKPRMVRSRQMCNTNMS VPTD/GCCNHLTDSSFGTRDPG*TKAIAF EVIKVCWCTKRHLYYERGSFLSWPVYY D
6272	14323	A	7025	89	291	

6273	14324	A	7026	1295	1429	
6274	14325	C	7027	332	763	MTGCLNFIENDEVLVAWIWSQKVMLL VIFLESXFKVVQSSPMVSLALYKWL ETKIINMNGENTVVINFHMPKNVCILLSP VLTTKIMFITTTPPYFFYPKPVNAGVPPI LGNNKTGLFQDSLELITFVTWHSFHPVE *
6275	14326	A	7028	89	184	
6276	14327	A	7029	2	274	LDLDKSIKIVKKLKLTFGPYKIFKNTSFI/ KDIVFMRTWYPVSPAFYNPVTSLKLP/V GEKDTWSGMWTTGHLGL/AHGVRLKTN KDSLYKGLV
6277	14328	A	703	220	476	HNSLVVYYFEIWSRILFVYSCSIHTSVVT H*SLLSLGHLKYIWAGHGVSHL*FQHFG RPRWENHLRPGL*DQPGQHSETPSLLKK
6278	14329	A	7030	178	619	PPRHVQLNHAEFEDQDDEARVQYEGFR PGMYVCVEIENVPCEFV*NFDPRYPILG GLGNSEGNVGYVQ/IPITPQGTGFLAIQSV SGIMPDFRIAATGVVLDLDSIKIVKKLK LTGFPYKIFKNTSFIKGMFNSALEVAKFE GAVF
6279	14330	A	7031	159	484	DPITPQGTGFLAIQSVSGIMPDFRIAATGV VLDLDSIKIVKKLKLTFGPYKIFKNTSFI KGMFNSALEVAKFEGAVIRTISGIRGQIK KAL*APEGAFRASFEKLL
6280	14331	A	7032	19	3881	IATMEAKDQKKHRKKNSGPKAAKKKKR LLQDLQLGDEEDARKRNPKAFAVQSAV RMARSFHRTQDLTKKHHIPVVDRTPLE PPPIVVVMGPPKVKGSTLIQCLIRNFR QKLTEIRGPVITVSGKKRRLTIECGCDIN MMIDLAKVADLVMLIDASFGEFEMETFE FLNICQVHGFPKIMGVLTHLDSFKHNKQ LKKTKKRLKHRFWTEVYPGAKLFYLSG MVHGEYQNQEIHNLGRFITVMKFRPLT WQTS
6281	14332	A	7033	182	374	
6282	14333	A	7034	2	198	
6283	14334	A	7035	1	457	
6284	14335	A	7036	2	145	
6285	14336	A	7037	55	193	
6286	14337	A	7038	564	882	
6287	14338	A	7039	257	513	KFFSFLSSACCLEQVLFVFFVFFLLLI FSFFFSFSPSSFFSSSSSSSSSSFFFLR WS/PRSVAQAGVQ/WS*FGSLQPP
6288	14339	A	704	1	554	DLILNHLFFCFVIRQQFSFLFFPSFFHFI AMLT HQSYVIFLSVYTVIIHLDYISLFLT YDIMYF*TKINT*AKLLLIYENMLIVL*CS AFLSNYTVLIVQIIASLIHSSTK*ISQCANI KI*ILH*L*SSVEINSYL*LFCYLVYSAIL ELVLQSQFSYMYILRIQLDFLNEEMHI
6289	14340	A	7040	936	1317	ILVLHGCFICWWYLCLSMYFFNFEME SRSVAQAGVQWCA/DLCSLQAPPAGFTP FSCLSLPSSWDYRHPPRLAKFFVFLVET GFHRVSQDGLDLTSGDPPTSASQSAGI TGVSHRARPLKHLS
6290	14341	A	7041	1	1218	

6291	14342	A	7042	1	1169	MAPPSPTTSSNNNSSSSNSGWDQLSKT NLYIRGLPPHTTDQDLVKLCQPYGKIVST KAILDKTTNKCKGYGFVDFDSPAQAQK AVSALKASGVQAQMAKQQEQDPTNLYI SNLPLSMDEQELENMLKPPFGQVISTRILR DSSGTSRGVGFARMESTEKCEAVIGHFN GKFIKTPPGVSAPTEPLLCKFADGGQKK RQNPKNKYIPNGRPWHREGEVRLAGMTL TYDPTTAAIQNGFYPSYSIATNRMITQT SITPYIASPVSAQYQVAKETRENKYRGS KIQSPSWMQPQPYILHDPGAVLTPSMEH TMSLQPSMISPLAQQMSHLSLGSTGT MPATSAMQGAQYLPQYAHMQTTAVPVE EASGQQQVAVETSNDHSPYTFQPNK
6292	14343	A	7043	1	743	
6293	14344	A	7044	2	171	
6294	14345	A	7045	1	350	
6295	14346	A	7046	2	1685	
6296	14347	A	7047	47	218	
6297	14348	A	7048	3	1716	GRCCCFSPDGKALAVGLNDGSFLMANA DTLEDLVSFHHRKDMISDIRFSPGIWPVI GEVTDVTASCLTSDKMVLATGDDLGFV KLFYPTKASSEQGPPTARETPDKQCRQ EKETYRATAPSIHIWDAMNKQTLILRC YHSKGVCSVSFSATGKLLSVGLDPEHTI TIWRWQEGAKIASRAGHNQRIQVAFERP DSDTQFVSVGVKHKFWTLAGRALLSK KGLSTLEDARMQTMIAIAGAGKILVG TRNAEIEVGEKNAACNVLNIGHVDGPI WGLATHPSRDFFLSAAEDGTVRLWDIAD KKMLNKVNLGHAARTVCYSPGDMVAI GMKNGEFILLVSSLKIWGKKRRDRCAIH DIRFSPDSRYLAVGSSENSVDYDLTLGP TLNRISYCKDIPSFVIQMDFSADSSYLQV SSGCYKRHVYEVPSGKHLMGSSAIDRIT WATWTSILGDEVLGWISRHAEKADVNC ACVSHSGISLVTGDDFGMVKLFDFPCPE KFAKHKRFLGHSPHVTNIRFTSGDRHV SAGGDDCRLVTFSAHEEQTMILLVKRLN TTIPTALVYEIS
6298	14349	A	7049	1	5853	
6299	14350	A	705	1039	1560	SLVLDLTGLPRPTSPSHERGLDSSSSGPG LSTGP*ECSPDPNPMCPKVLPGPDQRCW NSHSTAPIAFPEPVRSR*SGSWTPVPATG ATLNPRCQRLAIPNSLVSSP*GPAGWRE LPSSQQAHPHPR*GALRSENROEGPDQ GCGNCFVKYGGVGRVGYSGPVRTGCS RASN
6300	14351	A	7050	1	426	LKQQIEEQRVQVQVVERAQQVAVQE ARAEAEQMAKKAQ/AFQLYQEAQQLDM LLEKLPQVAEEISGPLTSANKITLVSSGS GTMGAQVTGEVLDILTRLPESVERLT GVTILPRLNHKAF*RTALSLQPSQMPSLI AE
6301	14352	A	7051	162	1449	
6302	14353	A	7052	57	389	

6303	14354	A	7053	162	1581	TMFFTCGPNEAMVVSGFCRSPVVMVAG GRVFLPCIQQIRISLNTLTLNVKSEKV YTRHGVPISVTGIAQVKIQGQNKEMLA ACQMFLGKTEAEIAHIALETLEGHQRAI MAHMTVEEIKDRQKFSEQVFKVASSD LVNMGISVVSYTLKDIHDDQDYLHSLGK ARTAQVQKDARIGEAEAKRDAGIREAK AKQEKVSAQYLSEIEMAKAQRDYELKK AAYDIEVNTRRAQADLAYQLQVAKTKQ QIEEQRVQVQVVERAQVAVQEQEIARR EKELEARVRNPAAEAERYKLERPAEAEKS QLIMQAEAKAASVRMRGEAEGLCP*GP EPRAEAEQMAKKAFAQLVPRGVAQL DMLRRESCPRWQEEISGPLNFSPIRSPLV SSGSGTMGAARKVTIGEVLDILNSPCPES VERLTGREHLPRVNHKPLKNSLEPSAL HRCPASLAEVALNDPPVACNPLGLPEHV H
6304	14355	A	7054	1	327	
6305	14356	A	7055	1	202	
6306	14357	A	7056	1	493	
6307	14358	A	7057	409	521	
6308	14359	A	7058	296	869	
6309	14360	A	7059	1	848	MPGLRVKMPCGPGISQDEAVWSMDDNF EVNKQHPVWRAATLAKDCKNQSAQAV TVYNKPASFFKEAPLDLQHRLFMKLGST HSPFRARVFFCSFISEPEDPATERLAFTER DAGSRLVTLHERPALLVSSTSWTGKGP LREYYSRILIYQKHQHIQVCTPWLGAED YPLLIGSADLGIVCLHTSSSGLDLP/L*KV VDMFGCCLPVCVAVNFKVFTLVKHEEN GLVFEDSEELAAQLQMLFSNFPDPAGKL NSFRKNLPESQQL*WDES WVQTVLPLV MDT
6310	14361	A	706	644	930	EGSHGLGVVAHACNPSTLGNRCGVDHL SSGVQGGQPGQHGTTPFLQKIQKLAGHG GTRL*SSYLRLRWEDEGGRGCSEPRSRH CTPAPWATE*DPV
6311	14362	A	7060	738	1902	FHHLTETNSPNYFITMALNVAPVRDTKW LTLEVCROFQRTCSRSDEECKFAHPPK SCQVENGRVIACFDSLKGRCRECKYL HPPTHLKTQLEINGRNNLIQKTAAML AQMQQFMFGTPLHPVPTFPVGAIGTN TAJSFAPYLAPVTPGVGLVPTTEILPTPI VPGSPVTVPGSTATQKLLRTDKLEVCR EFQRGNCARGETDCRFAPADSTMIDTS DNTVTVCMDYIKGRCMRECKYFHPPA HLQAKIKAAQP/QAAATVMTQSTAKAM KRPLEATVDLAFPPGALHPLPKRQALEK SNGTSAVFNPSVLHYQQALTSALQHQH AAFIPTGSVLCMT PATSIVPMMHSATSAT VSAATT PATSV PFAATATANQILK
6312	14363	A	7061	1	240	
6313	14364	A	7062	3	354	
6314	14365	A	7063	1	621	
6315	14366	A	7064	362	720	
6316	14367	A	7065	1	2610	
6317	14368	A	7066	122	1840	
6318	14369	A	7067	1	1433	
6319	14370	A	7068	3	324	
6320	14371	A	7069	3	421	
6321	14372	C	707	185	397	
6322	14373	A	7070	3	552	
6323	14374	A	7071	3	600	
6324	14375	A	7072	3	550	
6325	14376	A	7073	1	102	

6326	14377	A	7074	3	1451	GAVRTWGRGFQTEKQASLLNFWNPPT TAQVTIEAEPTKVSKGKDVLLLVHNLPO NLAGYIWYKQGMKDLYHYTTSYVVDGQ IIHYGPAYSGRETVYSNASLLIQNVTRDA GSYTLHIVKRGDGTGETGHFTFTLYRH SLDSALSLEVTGSSQPL*DTWENCPTLW LHCLMTELTSGLDVLPVISAEPSPRS GFPVSKGFKDNWKFHHPSLGCPWQGKL QRKHTSGGKVRLLKRRFQHCMLQVRTT SETPKPSISSSNLYPREDMEAVSLTCDPE TPDASYLWWMNGQSLPMTHSLQLSKNK RTLFLFGVTKYTAGPYECEIRNPVSASRS DPVTLNLLPKLPKYITINNLNPRENKDV LAFTCEPKSENYTYIWWLNGQSLPVSPR VKRPIENRILILPSVTRNETGPYQCEIQDR YGGIRSYPTLVNLVYTTKHSGLYACSVR NSATGMESSKSMTVKVSAPSGTGHLPL NPL
6327	14378	A	7075	3	435	
6328	14379	A	7076	79	1516	
6329	14380	A	7077	9970	11210	MKDACGGIKGATQDNLLSTQ/PKLPMP YITINNLNPREKKDVLAFCEPKSRNYTY IWWLNGQSLPVSPRVKRPIENRILILPSVT RNETGPYQCEIRDYGGIRSNPVTNLVL CEYPLFLCGPGHQLNSKRPEARPLSLSPV QV*TTLLDIRPGHDSLPWEILGRHSLNQ EYKGRGALVMGH*GPTACNERNRGIPO AWA**T*MGFGCHLRCLGSEGHCVPLR DQEHPLPLDDITCGFILFPPDGPDLPRYP SFTYYRSGENLDLSCFADSNPPAEYSWTI NGKFQLSGQKLFIPQITNHSGLYACSVR NSATGKEISKSMIVKVSQKWPASLAIGF *VESIWLSEKSQENICIPRLCPMGTSKSOI LLNPPNLSLQTLFCLFFCFLMADLVSGL RKVGRGLYQP
6330	14381	A	7078	460	1832	QPVLEFLDPRLISTEENTQAAETMGTL APPCTQRIKWGLLLTASLLNFWNLPTT AQVTIEAEPTKVSEGKDVLLLVHNLPO LTRATIWAYKQGMRLHYHYTTSYVVDG EIIHYGPAYSGRETAYSNASLLIQNVTR DAGSYTLHIKRGDRTRGVGTFTNLY LETPKPSISSSNLNPREAMETVILTCNPET PDASYLW*LNGQNLPMTHSLQLSKAN RTLYLFGVNTNYTAGPYECEIWELRECQ ARSDPVTFEFSSRKLKPYITINNLNPGE *GCL*TFICAEPKSENYTYIWWLNGQKPP/ VSSPRVKRPH*KTGSLIPTPVFTRKWQKQ PYSMWNYGDRYGGVIRSLPSSPLNCSSYG SRTSPRILPFHFTYVRFREENLDLFLGFT GIFNPPAQYSWDN*WKSQFQTRGQKLF YSGHITTKHSGLYVCSVRNSATWQGA PNP
6331	14382	A	7079	2	315	RWSLCPLQAGVQWRDLCSLKPPPEFKQ FSCLSLPSS*DYRCPPPCPANF/SFFVFLV ETGFHHVGQAGLNLTSRDLLTSASQSA EITGMSHCPRTLNSRVL
6332	14383	A	708	3	521	CKMDAGFFVGTSAEQDNVRVSNKQKWL LKQLKFAECLEKKVDMKVNLEVIKPV ITKRVTEILGFEDDVVIEFIFNQLEVKA*T KMEVIPCV*SIAPSPY*VTAE*VSQCRSDP TPLMMQCVFGNPD SKMMQINLTGFLNG KNAREFMGELWPLLSAQENIAGIPSAFL EL
6333	14384	A	7080	1	534	
6334	14385	A	7081	1217	1545	

6335	14386	A	7082	2	1665	KKKKKQKNKKSSTGEASENGLEDIDRIL ERIEDSTGLNRPGPAPLSSRKHVLYVEHR HLNPDTELKRYFGARAILGEQRPRQR VYPKCTWLTPKSTWPRYSKPGLSMRL ESKKGLSFFAFEHSEYQQAQHKFLVAV ESMEPNIVVLLQTSPYHVDSLLQLSDA CRFQEDQEMARDLVERALYSMECAFHP LFSLTSGACRLDYRRPENRSFYLALEYKQ MSFLEKRGCPRTALEYCKLILSLEPDED LCMLLLIDHLALRARNYEYLIRLFQWE AHRNLSQLPNFAFSVPLAYFLLSQQTDL ECEQSSARQKASLLIQALTMFPGVLLPL LESCSVRPDASVSSHFFGPNAEISQPPA LSQLVNLYLGRSHFLWKEPATMSWLEE NVHEVLQAVDAGDPAVEACENRRKVLY QRAPRNIHRHVILSEIKEAVAALPPDVT QSVMGFDPLAPSDTIYSYVRPERLKSL SHGNTVALFFRSLLPNYTMEGERPVEEG VAGGLNRNQGLNRLMLAVRDMMANF HLNDLEAPHEDDAEGEGEWD
6336	14387	A	7083	420	627	
6337	14388	A	7084	2	380	
6338	14389	A	7085	2	657	
6339	14390	A	7086	2	842	
6340	14391	A	7087	174	463	GSLKQGMFPSGLNRRLPTEsplQILRATF L*KEVA*GLHQYHLPLAQLLSGPVFLTH LQSAPVFREKPDPPPELPSLRVLRRTLDS WGARTHNYGI
6341	14392	A	7088	69	194	
6342	14393	A	7089	1348	2204	TWRLDPQIISSPKPQPGGTYTLEVVKSSK SKKVLSPHP*WPPLRLWQRIGGSPEGGT QAPDGLPPPPRPKSERVSGPKLGGKR /EGSHPGGPPHITHP/DGEEKAKSSWFGL REAKDPTQKPSHPVKPLSAAPVEGSPD RKQSRSSLIALSSGLEKLTVTSGSIQPV TQAPQAGQMVDTKRLKDSAVLDQSAK YYHLTHDELISLLQRERELSDRDEHVQ ELESYIDRLLVRIMETSPTLLQIPGPPK
6343	14394	A	709	730	983	GAVAHICKSQQFGRPRQAHQLRSRV*DQ PGQNDETPSILKIQLAGHGGTRPLSOLL RRLRH*NHLNPGGGGCSELRSRHICIPG
6344	14395	A	7090	2	762	
6345	14396	A	7091	2	218	
6346	14397	A	7092	7	78	
6347	14398	A	7093	553	954	SRSRRGQKRRRWSTVWRLSAGACALSM QTPSRTSWPTAPFRAIWAETVAAWCRL RRPVWRVWSWSCLPTPITRATPLGARS WPGWRMWPPLQAGSAVPTLR*RPLKVF PLPRVPGRRPSGAQSHREQLOQT

6348	14399	A	7094	1	1215	MTLKEHAAFKHLFNKAHLAPPLIHLTSL GHSTCFREHWVGDIVHRDLKLENIMVK SLIDDNNEINLNKVTDFGLAVKKQSRSE AMLQATCGTPIYMDRGWNSLEGSEQDR KMWDSLELPRDLLNVFEQNADNDMD EIQAELVSDGDEELLGNWSKGDSCYVLL KQLAAFCPCRLDLWNFKLERDDLGYLV EEISKQSQIEATWVLLKAFSFIRESAEHK NLENLQPDNAIEKKIPFSEEKFKLAAEICI SNQEANVNPQDNEKNVSRACQRSSQOP LPLPRVLGGKSGFVGWAQDSHAEIYTFG RILGKSGFIVIEATDKETETKWAICKVN KEKLLLMKSNFLQPVRTTLCVAVQVSHL ANSFQLKSREKWRKPL*LKEHAAFKHLF NKAHLAPPLIHLTSLGHSTCFREHWVGD VHRDLKLENIMVKSSLIDDNNEINLNK TDFGLAVKKQSRSEAMLQATCGTPIY DRGWNSLEGSEQDRKMWDSLELPRDLL NVFEQNADNDMDDEIQAELVSDGDEEL LGNWSKGDSCYVLLKQLAAFCPCRLDL WNFKLERDDLGYLVEEISKQSQIEATW VLLKAFSFIRESAEHKNLENLQPDNAIEKK IPFSEEKFKLAAEICISNQEANVNPQDNE KNVSRACQRSSQOPPLPRVLGGKSGFV GWAQDSHAEIYTFGRILGKSGFIVIEAT DKETETKWAICKVNKEKSTAYEKQFPAT SKDNFDMCSSSTSSKLLPAEIKGEMEKT PVTPSQGTATKYPKSGALSRTKKKL
6349	14400	A	7095	1	770	
6350	14401	A	7096	7265	7684	IVSLFLFILLVFWWWCFFFFFFFETVLLFS PRLQCRDVTSAHCNFCFPGSSDSRASAF RVARITGAHHDWLFICFSRDRVLSCWS GWSRTSDLR*SALPKCWDYRCEPPCRA* FFFLYPLTIPTSLPAPHYPPSLW
6351	14402	A	7097	1	344	
6352	14403	A	7098	3	285	
6353	14404	A	7099	346	517	
6354	14405	A	71	134	450	QSPDSMNAREFRRRGMEMVDYVAYYM EGIEGLLVYPDV*PGYLRALIPAAAPH*L DTCEDIISDAEKIIMPGLSHWHSPDLFVY FDSVSSYARMLEDMQCGALDC
6355	14406	A	710	108	418	GWGGLLIARPPFKRGKSSGPVGHKPRG VGGRRG*NVNLCPKSSNPQGGGERPRE LRDKATVSALANFTARKGC*LRGPEGGO PGPRGKLFPGVPGVQGO
6356	14407	A	7100	3	173	
6357	14408	A	7101	256	352	
6358	14409	A	7102	1	203	
6359	14410	A	7103	1	112	
6360	14411	A	7104	1	1213	
6361	14412	A	7105	3	413	
6362	14413	A	7106	45	537	
6363	14414	A	7107	2	224	
6364	14415	A	7108	179	393	DKWRRLPWKRGVEVGTAGSLAKAFGFF AEAKTEPREGCESEGVRSYQ*VQQTNS KCLKY*MEPARPTFSP
6365	14416	C	7109	21	410	
6366	14417	A	711	274	394	SPFPKEVGGGKFLNLGGQRFWGPFGPL FSAKTKKGTSFLK*GFKNPPAQGGKPPFF LKIQN*PTLGGGPLNPHFLRRLGGENF*T SEGKGFGDPNLALCSPPKQKKGLLF
6367	14418	A	7110	3	178	
6368	14419	C	7111	134	295	MNSVPLAKSVGLLRTRYDSPKQPLLC EAVVLICKDLRSGWQKPGTQGIGG**
6369	14420	A	7112	3	864	

6370	14421	A	7113	3	155	
6371	14422	A	7114	1	122	
6372	14423	A	7115	84	579	NWKAGMGRPSTADYAMFKVVHEVD\K YRFTYAYFAGGDAEDAFDGYDFGDDPS DKFFTS\HNGMQFSTWDNDNDKFEGNC AEQDGS\GWWMNKCHAGHLNGVYY\QGG GTYSK\ASTPNGYDNGI\WATWKTRWYS WMKKT\TMKI\PFNRLTIGEG\QQH\HLGGA KQAGDV
6373	14424	A	7116	19	418	VEMGFCQADQAGLELLTSGDPPASVSQS TGITVLSL\FFFETESRSVAQAGVQWRDL GSLQRP\PPGSRHSPASASRVAGTTGARR HAWLIFLYF/LVETGFHRSVDGLDLLTS *SARLSL\PKCWGYRREPSAR
6374	14425	C	7117	207	401	MGXXIFXPLXKTP\PPFP\GVWGKNFSPGP GXPX\PPRGGPPPL\FPQKKGX\PPPPFP KVLGLQA*
6375	14426	A	7118	2	681	FFEMESRSVAQAGVQWRDLGSLQAPPP GFTPF\SCSL\PRSWDYRRP\TLLANFFVF LVETGFHCVSQDSL\DLLTLRSARL\FFFF ETESRSVAQAGVQWRALGSLQAPPPGS RHSPASASQVAGTTGARHYARLIFVFLV ETGFHRSRDGLDLLTS*SARLGL\PKCW DYRREPPRPAVRVYFYNRSVFIEYVQFC KLLFTFKINVR\SQNILGSPNILKSL\KNLN
6376	14427	A	7119	3	265	FFFETESRSVAQAGVQWCHL\GSLQPLPP GSSDSPASTSRVAGVTTAT*VAGITTV RHHAWLIFVFLVETGFHHVQGAGLEHL DLR
6377	14428	A	712	59	306	FGTDRTAVQTSS\SQLCLP\WVAQKTYW LLVPSSLLKDLKEKKEVVEEA*NGRDAP ANGNAVSVCFAP\EPWQLPHKIFPVLL
6378	14429	C	7120	359	583	
6379	14430	A	7121	279	566	FRRRFPLISL\FFFFL\FFFC\FFFETESRSVA QAGVQWRDLGSLQAPPPGFTPF\ALSRL ECSGAILAHCKLL\LPSSHS\PA\SANRVA GTTGTRHH
6380	14431	A	7122	237	523	PQEFKTS\PGNVAR\PLYN\FFFFFETESR SVSQAGVQWCDL\GSLQAPPPGSHHSPA SAS*VAGTTGAHHHARLL\FVFLVETGFH CVSQDGLDLLT
6381	14432	A	7123	1023	1459	KGTRKRGQGIKVHLPI\PILLFNLICFTFG LFLVFLFL\PPFFFFFIEISHSVAQDGVQ WCNLGSLQTPPG\SSDSPASAS*VAEITG TRHYAWLIFLFL/VEMRFHHVQGAGLEL TSGDPPASASQSAGIRVMSHRLVFLYY K
6382	14433	A	7124	1794	4614	RFFS\FFFFFETESH\VAQAGVQWCNLGS LQAPPPGSRHSPASASRVAGTTGAHHH ARLIFVFLVETGFHRISQDGLDLLTS*SA RLGIPKCWDYRCEP\PHLASI
6383	14434	A	7125	2	441	FFFFFETESRSVAQAGVQWRALGSLQAP PPGSRHSPASASQVAGTTGARHYARLIF VFLVETGFHRSRDGLDLLTS*SARLGLP KCWDYRREPPRPAVRVYFYNRSVFIEYV QFCKLLFTFKINVR\SQNILGSPNILKSL\K NLN
6384	14435	A	7126	3	226	CETESRSVTQAGVQWSDL\GSLQAPPPGS RHSPASASQVAGTTGAHHHARLIFVLLV ETGFHRSVDGLDLLTS
6385	14436	A	7127	153	504	KH\FFFFFETESRSVAQAGVQWRDLGS LQAPPPGSRHSPASASRVAGTTGTRHRA WLIF/VYFLVETVFHRSVDGEL*KLYRE NSIENILVQKCLKVYFSHCSRSEITVTGN NLL

6386	14437	A	7128	3	313	FLFFETESCSVAQAGVQWHDLGSLQAPP PVGSHSPASASQVARTTGTRHHPRLIFF VFLVEMGFHHVSQDGLDLLTLGSGHLSL PKCWDYRCEPPHPSSPSY
6387	14438	A	7129	3	307	FFFFFETESRSVAQAGVQWRDLGSLQAP PPGSRHSPASASQVAGTTGARHYARLIF/ VVFLVETGFHRFSRDGLDLLTS*SARLGL PKCWDYRREPPRPAYF
6388	14439	A	713	171	565	TLAFLIPCIGSPACPTMSDAAVDTSSSEIT TKGLKRRRRKLWEEAENGKRRPCLTGN AENEGKWSREA\DNEVHQKEE*CGEEQ EEEEEGDGEEDGDEDEDETLSATVTRAT EDEDDDAVAPTKQTTRLDE
6389	14440	A	7130	2	91	
6390	14441	B	7131	3686	14131	MTNAPQYVQKNRGIDSEDAYPYVGQSY YNLVSSSQEESCMYNPTGKAACRGYR EIEPEGNEKALKRAVARVGPVSVAIDASL TSFQFYSGVYYYDESCNSDNLNHAFLA VGYGIOKGNKHWIKNSQSAQTVLTPDE CLLLGYLDKGLKLRKDKAGSLQWAYM AIARLGGFMDSMPTGIAIWGALX*
6391	14442	A	7132	8044	8378	YIDVKTFFFFFLPETESHVAQAGVQWH DLSSLQPLP*PGSSDSPASASRVAGITGTH HHAWFIFVFLVGTRFHHLGQAGLELLTS SDPPASAPQSAGITGVNHHTQPQKFI
6392	14443	A	7133	3	283	
6393	14444	A	7134	2	177	
6394	14445	A	7135	1	491	
6395	14446	A	7136	3	612	
6396	14447	A	7137	2	137	
6397	14448	A	7138	1	2631	
6398	14449	A	7139	2	112	
6399	14450	A	714	1	1497	
6400	14451	A	7140	67	245	AYNLSDGQYGLVDPEFEYFFWLCCWLP L*LGGKCLWVLPVSVSGDRNDNDQAER NGSHL
6401	14452	A	7141	356	2252	RSFLDEEFPHYDSLSCADAIQQPLQEKLK QCCHKLYGGQEARIHQTPLTKHTCWY TPLLDALSLSFTAVPTLESTPFSGVANQ IHTLCERPTYGEVKDGDVLRQHKCPG PTSGPSPGTNLSCIRMNDPPSMEENG ERVCPESLLQSRGYSSLPLRHTSSTDGTI TSSDPGLEILNMASCDLDRNSLCKKEED TRSASPTIEAQGTSPAHDNIAFQDSTSKD KTILNLEAKEEPETIEEHKKEHASGDSVV SPLPVTTVKSNNVRQSENTSANEKEVEA EFLRLSLGFKCDWFTLEKRVKLEERSRD WAEENLKKEITNSLKLESPLCEDDN QAQEIIKKLESIKFLSQCAARVASRAEM LGAINQESRVSKAVEVMIQHVENLKRM YAKEHAEELEELKQVLLQNERSFNPLEDD DDCQIKKRSASLNSKPSSLRRVTMALLF LPR\NYLGNAG\MVAGMENNDRF\SRSS SWRILGSKQSEHRPSLPRFISTYSWADAE EEKCELKTKDDSEPSGEETVERTKPSLS EKKNNPSKWDVSSVYDTIASWATNLKS SIRKANKALWLSIAFIVLFAALMSFLTQ LFQKSVDAAPTQQEDSWTSLEHILWPFT RLRHNGPPPV
6402	14453	A	7142	1	835	
6403	14454	A	7143	1	3735	
6404	14455	A	7144	2	1161	

6405	14456	A	7145	126	572	NFSSNKWNTSQNFANMDNSAQKNERTG KHPRRASEVQKNDIPGPGFYNVHQSPV SNSVSLSKKGTCMFPSMCARLDTTVSKY PAANAYTIPSDFISKRDFSNSCSSMFQLPS FMKALKFET/PLAPNYYNASVSCCKRRN NVCTRAGF
6406	14457	A	7146	1	1261	
6407	14458	A	7147	107	227	
6408	14459	A	7148	3	407	
6409	14460	A	7149	3	608	
6410	14461	A	715	32	3730	NSERRGLGMSLADELLADLEAAEEEEEG GSYGEEEEPAIEDVQEETQLDLSGDSVK TIAKLWDSKMFAEIMMKIEEYISKQAKA SEVMGPVEAAPEYRVIVDANNLTVEIEN ELNIIHKFIRDKYSKRFELES LVPNALD YRRTVKVSAEKELGNSLDKVARAIEEPW QQILT NATIMVVS VITASTPQQQLSEE ELERLEEACDMALELNASKHRIEYVES RMSFIAPNLSIIIGASTAAKIMG
6411	14462	A	7150	2	212	
6412	14463	A	7151	3	91	
6413	14464	A	7152	1	115	
6414	14465	A	7153	1	1279	MGDTPRQFGGARPRSGGALRGCRSRGG GNRRGLCLSRALANGDRRLTMDDDIAA LVVDNGSGMCKAGFAGDDAPRAVFPSI VGRPRHQGMVGMGQKDSYVGDEAQS KRGILTLKYPIEHGIVTNWDDMEKIWHH TFYNELRVAPEEHPVLLTEAPLNPKANR EKMTQIMFETFNTPAMYVAIQAVLSLYA SGRTTGIVMDSGDGVTHTVPIYEGYALP HAILRLDLAGRDLTDYLMKILTERGYSF TTAEREIVRDIKEKLCYVALDFEQEMA TAASSSSLEKSYELPDGQVITIGNERFRC PEALFQPSFLGMESCGIHETTFNSIMK/C DVDIRKDLYANTVLSGRTPCTLGIADR MQKEITALAPSTMKIKIIPPERKYSVWI GGSILASLSTFQQM WISKQEYDESGPSI VHRKCF
6415	14466	A	7154	1	111	
6416	14467	A	7155	143	295	
6417	14468	A	7156	186	437	
6418	14469	A	7157	3	356	
6419	14470	A	7158	1	220	
6420	14471	C	7159	102	407	MDAGLEAMQKYGKAAPGDRTMLDSLW AAGQELQAWKSPGADLLQVLTKAVKSA EAAAEATKNMEAGAGRASYISSARLEQP DPGAXAAAAILRAILEVLQS*
6421	14472	A	716	3	117	HKRPLMASYLLFFCSFVRVE*TIITCLT** ECHRYNR
6422	14473	A	7160	1	2302	
6423	14474	A	7161	1	178	
6424	14475	A	7162	60	413	

6425	14476	A	7163	2	1420	NSGVGAGARRAARCRAEAAAAVGTARS PALGMALLVLGLVSCTFFLAVNGLYSSS DDVIELTPSNFNREVIQSDSLWLVEFYAP WCGHCQRLTPEWKKAATALKDVVKVG AVDADKHHS LGGQYGVQGFP TIKIFGSN KNRPEDYQGGRTGEAIVDAALSALRQLV KDRLGGRSGGYSSGKQGRSDSSSKDVI ELTDDSF DKNVLDSE DVWMVEFYAPWC GHCKNLEPEWAAAASEVKEQTKGKVKL AAVDATVNQVLASRYGIRGFPTIKIFQK GESPVDYDGGRTSRSDIVSRALDLFSDNA PPPELLEIINEDIAKRTCEEHQLCVAVLP HILDTGAAGRNSYLEVLLKLADKYKKK MWGWLWTEAGAQSELETALGIGGGFGYP AMAAINARKMKFALLKGSFSEQGINEFL RELSFGRGSTAPVGGGGFP TIVEREPWD GRDGELPVEDDIDLSDVELDDL GKDEL
6426	14477	A	7164	547	980	
6427	14478	A	7165	3	1290	LYSSSDDVIELTPSNFNREVIQSDSLWL VEFYAPWCGHCQRLTPEWKKAATALKDV VKVGAVDADKHHS LGGQYGVQGFP TIK IFGSNKNRPEDYQGGRTGEAIVDAALSA LRQLVKDRLGGRSGGYSSGKQGRSDSS KKDVIELTDDSF DKNVLDSE DVWMVEF YAPWCGHCKNLEPEWAAAASEVKEQTK GRVKLAAVDATVNQVLASRYGIRGFPT IKIFQKGESPVDYDGGRTSRSDIVSRALDL FSDNAPPPELLEIINEDIAKRTCEEHQLCV VAVLPHILDTGAAGRNSYLEVLLKLAD KYKKKMWGWLWTEAGAQSELETALG IGGGFGYPAMAAINARKMKFALLKGSFS EQGINEFLRELSFGGGSNGTL*GGGGFS LPIVEREPWDGQGCGRGFPWGDDH*PSV DAEVLDDL GKDEL
6428	14479	A	7166	335	519	ILFPGSGQLRSSDQKA AKLALL*FQKRS EMYKTK*FWGRKMSQFFSVVRHTNPG SRLWA
6429	14480	A	7167	2	386	
6430	14481	A	7168	311	493	
6431	14482	A	7169	2	82	
6432	14483	A	717	1007	1118	APGPCPNQTLARDSGWVG*KNHQLCTC VCVCVCVCVC
6433	14484	A	7170	51	347	
6434	14485	B	7171	188	353	XDVVVPVANC GVQEYNSNPKEHVTLRD YITYWKEYIQAGYSSPRGCLYLKDWHLCS*
6435	14486	B	7172	188	353	XDVVVPVANC GVQEYNSNPKEHMTLRD YITYWKEYIQAGYSSPRGCLYLKDWHLCS*
6436	14487	A	7173	753	1216	QVVEVGPPRGRHPSAAGCPSA*RRWKT RRAGWAARSPAQSRRRRRRPPARRRLP GPEPGRRRGRHPPGLSGCRRGRASRGP SSSARVEGPSSSLPPERKR*GPASEPEDA GRRVSAPPAPGARACTHARGSPRSSLR RRAAEARSALGLV
6437	14488	A	7176	27	285	VFFFFFFLRRSLALLPRLECSGTVFLVE TGFTMLARMVISIS*PRDLPALASQSAGIT GVSHRARPASFNL TINLP LLL WTF
6438	14489	A	7177	12	336	SPVQL*F*LFLVFC*LWSWSAVVYLGPL GTPSADAHT/AGLSKTPPHWAARARLDD VFSLRTFSSHSLNMELVQDLTASAPMYS STSRDPP/CLGLPKCWDYKREPPRAH
6439	14490	A	7178	74	463	HISQHRSYLVLLASYKTASFLFFFLRQ SL/DSVTQAGVQWRDLGSLQAPPPGFTPF SCPQSPK*L/SSWDYRRPPPRPANFFCIV EKECFLLARMVISISWPRDLPASASQSA GITGMSHRARPAQVS

6440	14491	A	7179	1	412	TRMGLPDASRRRTCRMDPEGWQEAMSS A*GRITLQRLSTGPEGQGGREKVGPEGG SENPQQPKAAGVLSKHLPGAPAQPPQRP PSSPPPLAGPLTERVEKVCDFLDAAGDY LN/GTPG*PSPGESPAADPPVPPWPP
6441	14492	A	718	1692	2123	SQPRFSWTQERLRLFPGMLLNSLIVSQAT QGPKLSCGLSCLMAFTFKKMEPSPMSCS PQCFGKPMMGRLSGGQKFKNQAGQYH KTPSLRKSKKLASHGGVHLWS*LLRRLR QEDCLILGIRGCSEL*LHLCPTPSATQRDP LS
6442	14493	A	7180	117	295	
6443	14494	A	7181	279	1065	IQHPRLSADDFRVNCETEPAM/*HAVEN DIHGLCELQLETEIQAFKEELL/FMKKNH EEEVKGLQAQIASSGLTVVVDAPISQDFA KIMADIWAQYDEVAQKNREELDNRRSQ QIEESTTVVTTQSTEVGAAMTELTR TVQFLEINLDSMRNLKASLENSLREVVA RYALQMEQLNGILLHLESELAQTWAEG QCQAQEQALLNIKVKLEAAIATYRRL EDGKDFNLGDTLDCSNSMQTIQKTTTR R*TRQIVDGKVVS
6444	14495	A	7182	60	846	IQHPRLSADDFRVNCETEPAM/*HAVEN DIHGLCELQLETEIQAFKEELL/FMKKNH EEEVKGLQAQIASSGLTVVVDAPISQDFA KIMADIWAQYDEVAQKNREELDNRRSQ QIEESTTVVTTQSTEVGAAMTELTR TVQFLEINLDSMRNLKASLENSLREVVA RYALQMEQLNGILLHLESELAQTWAEG QCQAQEQALLNIKVKLEAAIATYRRL EDGKDFNLGDTLDCSNSMQTIQKTTTR R*TRQIVDGKVVS
6445	14496	A	7183	645	861	KYYRKRGIHSAIDASQTPDVVFASILA S*ATCKDLVMFI*CWVQEGISFHPCEAM GGNDRTGKEKLPSG
6446	14497	A	7184	2	1327	RPQSLSPVLSLSPDSMSFTTRSTFNYS LGSVQAPSYGARPVSSAASVYAGAGGS GSRISVSRSTSFRGGMGSGGLATGIAGGL AGMGGIQNEKETMQSLNDRLASYLDRV RSLETENRRLESKIREHLEKKGPQVRDW SHYFKIIEDLRAQIFANTVDNARIVLQIDN ARLAADDFRVKYETELAMRQSVENDIH GLRKVIDDTNITRLQLETEIEALKEELLF MKKNHEEEVKGLQAQIASSGLTVEVDA PKSQDLAKIMADIRAQYDELARKNREEL DKYWSQQIEESTTVVTTQSAEVGAAETT LTELRRTVQSLENDLDSMRNLKASLEN SLREVEA/RRTPLQMEQLNGILLHLESE LAQTRAEGQRQAQYEALNIKVKLE AEIATYRRLLEDGEDFNFGDALDSSNSM QTIQKTTTPPG*VGLGKVVS
6447	14498	A	7185	2	345	FFFFFFETESRSVAQAGVQWRDLSSLQA PPPGSRHSLASAS*VAGTTGVCHHARLI FVFLVETGFHHVSQDGLNLLTS*SAGLG LPKCWDSEKLFFFGDKSFRFCPPGWST MV
6448	14499	A	7186	178	388	RREPLHPANLLFFFFFEMESPSVAQAG VQWRDLSSLQAPPPGSGHSPTSLS*VAG RLRNKNCLNPDAW
6449	14500	A	7187	546	850	FSVLFYFFESESCSVLQAGVQWRDLGSL QPPPPGSSHSPTSAS*VAGTTGTCHHTQL IFIFLVETGFHHIGQASLKLLTS*FAHLGL PKFWDYRCEPPHPA
6450	14501	A	7188	4	410	PIERPHELKHRLPHVQKLVEDVGDGVIP AALEEGQAGWSHGFLVFLVEIKSAEGP/P GPADSRVRGVRPQRSQSAGPA*RAGRQ DGVCRSLQGGRGGGRATSLVLHPPGY GCWFSVGVPSLPQYTGIRSSSPTRG

6451	14502	A	7189	148	268	LQPR*PLTCAPPPCPVQTQTHPISVSQTL GLEFCCSLSL
6452	14503	A	719	1	371	HRHCHPSHTVDGRMESIDVATDGG*RTG VLAVSGLSVSLRTAELSTRKLLMNSEQRI NRIMGFHLRGSGAVE*RHTQSMQHDS KLNSLIIPSVSKRVVLVDSVCTGTTDHQG GVLERKVTTL
6453	14504	A	7190	397	1449	RSHPSTGRRTSRLESWFLGVSCCKSKV REGPLGPA**AG*RGVRPQRSQSAGPA*R AGKRQDGG/SPEPRAGVGGVGTQSP/GP SGASGYPGMLVSKPVGGTSASWLPAGC PIPS*LS*QRSQSPSSCLIGHLLALWAAF GLGVTSLPQYTGIRSSSPTA*ATVQGDG HKGGTGGTGLGRGRNTQPDAAACGRGHR SSPTR/RPHGNPNGNTGCAEGGQARSLLP KLAPKLPWPVSVPVAVGPGDFGWRQ AQYQSSLWDLSSPRNTLGRSATSAGPAP PALLGAGSGRSSGTSPAAPGCSSRCHCW ASAPAGVSGGPG/GRGAEAPPSPTLAQR GSPPGAAIFPPACGIPP
6454	14505	A	7191	47	1654	LHVPARPPGCGGAFLAGGPCGWGQPR AQLWPQ/SAAPGPPHPALPSPVFPTWP RLLSH*S/RPA/VEQCPPEPHVYPDPASS WVPKSASPPRVACPCPPAL*/PFPDGSCL LCTAGLRGPGHDTLPQVWVRP/HPGAS AEM*AHKPPPLAQKPPRSISVPQPSAQL WYPAGPWVPT*AGTWLGYGAI*SPQGLF SFYEMEHGVPASLNPPKWEPHDRV*LGG GR*GKSEVPRGTPSLTGLFRGVPQGPPAI TGTQKHFPNDMVSFLISFFCLFCFGFQL G*/PPGL*SIHIEPLTGLPGCQG*A*P*VLL STAGSAHAV**GSELVHLQS*LHFPSFCP PPVLALDLQVCRPALSAFLACGPPAIPGS WSPEGPVSLWMGVRGVVPCLGLSLYPA L*NLARRGPGQPFTGK/IGEGTPTPHKPC NHQVRKLGVLPGGVKTKIEVGFWGPT R/PKAGETRG*VGRVPQSLA*PQCVSPEM LP*LSGTPGRSWG/PVLSPTPAHSQALRL CGHSPPCWSLVIGLELYFDAMKTLFISNV YIF
6455	14506	A	7192	4	496	NRRTERLGRWCPCTGAWPAPVNLAKLA PS/HDSEVVGSGCVPLAQSMAPPGPAWR AGHHRRRSENPRPGFFGSGFFKRFGTNR GWSRRDDDPGGPGSGSRWPPAPRRGGQ WRCPREPG*RRSSSAGRGSSPCALRHRA TKASSSCSSPCPTPTKRERAAASC
6456	14507	A	7193	3	514	SVPKREELQGHHRVRGGEHRVWTRQDV LQHRLPATSVWTHPVLPTARAPALGRA SGAARRTAARAAPLAPVAAAAAPGRA RPTTTWPASPPSPRSASPPTAPSSACWSP TP/GSPFALRPLRAGLGAVYTRSRAHPRR PLPAHLCVLRHRATKASSSCSSPCPTPT KR
6457	14508	A	7194	2	324	GGGFRPLFPPLWRPKPVGPPEVEIFGPAC PPWENPFSKIPNLPVVGPSDYSRFSSEG LARKLPLTRKGRFR*PKFPPLPSFLGKKR EIRFPKKTKKKIFINSSSC
6458	14509	A	7195	3	344	ERQKLHYKYSKQFLTQDQWNTNVKAE EPEEQKLATMFREQQKSL*ARMVQRQ RH*NKLN*NQQFLRSLEDLEENQSSFTD EQSDLRKEMARLQTKLMKETLQDLALI HSC
6459	14510	C	7196	68	319	

6460	14511	A	7197	56	945	HRKLD RNYSRHMGCGSPGPEPRRAEPC PPVRCMPTKETGAFRSHTRSRLGPF*SLAE PPF/PRVPVSRGPLSASSPPPLSSRDAGLQ TSQLLP/SWGWSPNSIPELDLGPLSPTGR LSAAFFPCRSPSTGNGKDATSQVDSHPV PSFRSPGLELSRCPGDPVTATSPHEWTQQ GKDWRPCSCPLVMQAPPTSHIFLPPPSRS SLRRFRAPSGCPWGCLG/RPPAGPWATP LAGLPSWS/GVRLPG*GVLPASRGSG*G PPRHRPDAGSERAAAAAGFAGP*VCSN SSALPSVYEGLL
6461	14512	C	7198	161	262	MLKGIPCLHPPLASSSQSDNSQKCLQTLF SLPR*
6462	14513	A	7199	132	1007	NPQAPQATKKEGRKNARKGGSVCSGVP WGPPPRKVPTVPWRAESPGGESHAGFE SLRHGHAGAGPKGMPRLPTENTVSAE GSTGGESGARVPDTGKGL*PATHPLPWG SLSGF*ETQRL*G/PCLEGG/YPGEAGQSL ETFLAVV*LGAAG*GWVEARDTFKHPTV CRTAPTKESSPETQQSGAGIGEAAVWC QPHIGRRALQEACGEHGDGRFRFGGNHA E/PDRGGNEAAPTNNNTHPDGHTSL*G/ VTGPSP/PGRWGN*GPESSEPGLDPGPPH PPTSWCGLFLRSFRLHS
6463	14514	A	72	218	428	LSSLPTTISR VFYNLS/CSHL*YSLKHFFY LFIYLFYLFYLFIFETESPLSPRLECRSGI SAHCNRLR
6464	14515	A	720	3	408	DAWANARSVRLEVAGLRRDL*R/CSER WPLARATPFCFGSAMPMYQEEENLSLQ ALESRQDDILKRLYELKAAVDGLSKMIQ TPDADLDVTNIIQADEPTTLTTNALDLNS VLGKDYGALKDIVINANPGFPPLF
6465	14516	A	7200	59	326	TGLSPGSEIGALPGNLV*APFFFNPKNLP GAVGP/PGVPPFWGG*ARGLGGRSSEFP LVGLGPLAFRLGTKLGPVFKKNQESKKK TSV
6466	14517	A	7201	3	263	TLRKKFFQPGKTTFRSPHTPFSSFFPQKK EKL*GGNPPKFPPPKKKPPPKPP/HHPPSS PPPKSSSSQSHAPPKKGPPPEPLKKNPP
6467	14518	A	7202	1	348	RYRSGIPGRRTRAGETPSLLKIQPG/GD GARS*SRLRLRLQENRLNPEGRGCSEL RLCHCTPAWARE*DSLKKKKKEFKIPIY FLTLLWDVFRTOYTYSIPMCLLCGEMVT DI
6468	14519	A	7203	3	441	SSGSRSECRFLPLLFNVVLEILAGAIR/Q KE/IKGIHIGKVKVSIKLTEVINKFIKVA*Y KIN/SNKSVCYTNNEQLEKKFKISSSS SSSSSSSSPNH*GKDLYNENLKTLLKEM KENKWINIPCSWIRRLNNVNISLSKVTY KF
6469	14520	A	7204	3	310	TINCVDITDIYRLHPSTADCTFCPSSNGI FTNIGHILGKTHINKFISIEFI*CLLSDHRI KLEINNKTWKIPKYL*INTLIKEKCEEQF *NTVN*NPNTI
6470	14521	A	7205	3	88	
6471	14522	A	7206	2	1053	TMPSSVSWGILLLAGLCCLVPVSLAEDP QGDAQAQKTDTSHHDDHPTFNKITPNLA EFAFSLYRQLAHQSSTNIFFSPVSIATAF AMLSLGTKADTHDEILEGLNFNLTEIPEA QIHEGFQELLRTLNPDSQLQLTTGNGLF LSEGLKLVDKFLEDVKKLYHSEAFVNF GDTEEAKKQINDYLEKGTQGKIVDLVK ELDRDITVFALVNYIFFKGKWERPFEVK DVEEDFHVDQATTVKVPYELKRILGM FNIQHLAKKLASSWGAA**KYLGNATRH LLSCLDGGGNLQHLGKIELHPTIIHSPSFL GEIEGQ/DRSCPALHFTQIVPLLGTYGFLK SVLGFNWGIH

6472	14523	A	7207	2	334	RDPPGPGPAITARERKCAKHPSLHQITV THLKL*VVLAQLTLEEPHCHANPD LIFE DMEAMTDLELHELCCQDRHNNFQLDM DLILD SGKFQVVG CILSELKQK DSSN
6473	14524	A	7208	1	306	LRRS/LCSVAQAGVQWWDLSSLQPLPPG PMPFPRLSLPSSWDHRRPRPLPANFLYF* *RRGFTVLARMVSIS*PCDPPASASQSAG ITGVRHRTQPPRYVFM
6474	14525	A	7209	156	331	QPLILRCLPPRSIYRFNSIPIKIQTFF*EK EKSLLKFIQNLKGP*ITKTILRKKKVD
6475	14526	A	721	25	494	PLTVSERWPLARATPFCFGSAMPMYQV KPYHGGGAPLRVELPTCMYRLPNVHGR SYGPAPGAGHVQEE SNLSLQALESRQD DILKRLYELKAAVDGLSRRIKPPRATLD ETNIIQADEPTTLTNALDLNSVLGKDYG ALKDIVINANPGSPPLS
6476	14527	A	7210	50	269	FRNIKHQRDYNEQ*YG/NKLDNPEDMNK F*ETRYT*/PNLHQEEIGMLNRPVTNKVL *LVIKIPLTKKSPEPDGFV
6477	14528	A	7211	584	1001	ILKLWGVGTG*TKVPPQVPPTPHSRA*GP PRRECLRRQ*PRP*SPGFGPLSFPTSVELM GVKTVLSQGASRERGSWG*KGSPLNGR QFWAQGGA/LSWVAWGGGGGWGSGNG KG*QPGEQSSSLQPLIPPRTW RMGPQG
6478	14529	A	7212	79	315	ERDFLFVPRVGFQGNLG*LKFPLPLPL FSGLTLP/RNWGLRGPFITPG*FLDFLKK RGNIVAQVGLKFWTSGDPPPL
6479	14530	A	7213	247	827	KYLEIVLLKY*RNSESCVFIKCSFSLIL LELTMKKKILCLYI*LLTVQTVTQWIFV CPPKTF*S*AJFNKDV*HILILIVKLLV WVQYILSFLILLKLN*DVCFVLLH*VLF KNSLCVYELILDFLYSMIKDN*KFCTFL GPWKVF*YFLRMSIYFVHNKLALYMK MGLNQIKKVMMLSSKKK
6480	14531	A	7214	1	311	LNREKLKAFPLTSGT*QE/CPLSPLLFNVV REVLATAIRQEKEIRGIQIGKEEVTLSLFV DDMILYLKKPKDCTKKPLEL/NTFSKVA* YIINIQISVAFLNAKSK
6481	14532	A	7215	6	375	ESLRSPSRFS*PSPAYRGHGCSRPAETH NGDPCRAEALSDTPVQSSGSDHNEKG PSRSPFQLH*PGPWGPAGCRGRPAPTPW RLAPAGPLRDSQEDPPSPEEPGSGGAAGQ GGG*GLSCFP
6482	14533	A	7216	80	251	GKFHISKTL**NINILL/VQLSVVAIGINY RTSNVEVLLQFLEDQNTFPNFEHLAYR
6483	14534	A	7217	161	333	GKFHISKTL**NINILL/VQLSVVAIDINY RTSNVEVLLQFLEDQNTFPNFEHLAYW
6484	14535	A	7218	3	299	PPFRTHQARRFAPTQDWQIGFTQH/RP/G VRKQK YLLV*VDTFTG*VKAFPTSDKA TAVITSLSDIIPRIGLPTCIQSSSTLALISQ ISHPSCQAATIQ
6485	14536	A	7219	526	1108	TQTKNSKIYFN*LLF*ETGPHSLSPQAGV WWHSHISLQPQPPGLKHPHPSLLSSWD YRHTSLRPANF*KIFVETGSLHVAQDGLE FLGSSPPVSASQSARIAGMSLGARARPC LK
6486	14537	A	722	358	445	NSFGRITIFFY*FFFFFFFFFTIQTGKGPL SPFFLLFFINPFRFFFF*TFPLRALAFF KPPFFFKIVLAEPYFFFTNPQILMRGGGG FSGRGS
6487	14538	A	7220	181	272	IQSWFNILKSIHVIHHSNRLK/NVNHI VSS SSSSSSSSSPFLIKKQ*KG
6488	14539	A	7221	2	334	YDEEWRRTVHPDEVGNLK*EDR*ALQ NRLRVFLSLMDTGWLDNLLLDIDKADVI VKMLDA\SVIKMEGGTDNDLNILDQDVE DEHA*KPGEPSKNEEGRAVSGLGDGERK

6489	14540	A	7222	1	323	VVSYLLVFESSK*KKIYQDCIGFVQDC LNIIDPIDSLRGKNVIISLDTEKVVGKIQ* PFMTKIFSKL GIEGNFLKWLKYQQSSTVS LLNV*ILKAFLSRTE*GCM
6490	14541	A	7223	2	690	ATYIVDFGFQYNIREGQMLTAFCGMYP YVAPERSLGQACQ*PARDIQLSVILYFR NTVGRRTLPFYS/AEASKLQEKILTGR YHAPPLFALQLDSL/IKLLMLNARKGPSL *LMKNPWVKRIQKMPLIPYEEPL/RGPPQ TIQLMVAMGFQAKNISVAIERKFNYPM ATYLIL*HTKQERKCSTIRELSLPPGVATS PSPSTELSTFPLSLMRAHREPAFNVQPPE ESQ
6491	14542	A	7224	2	338	SSSYTPEYWQ*RSRSHSPMSNQRRHTGR RANPDPNTCLRVFGLSLYTDRDLREVC S*YGPLNGANVVYNQQTGRSQGFAFVH F*GIDDSKEAMVRANRKELDORRVRVD YS
6492	14543	A	7225	604	841	RPGGQFCLMEASPSGFNPFFLLNLPREW ELRVPPPTRGNFF*FLKKNGF/EVNPGGF DFLN/SNDPPAFASKGVGLTALTP
6493	14544	A	7226	3	343	HEPNGFYAEIECERCNSPELDEEGYSIIPD EPGSTNGKHFYSSSESEY*E*SHKNIYQIK PSLSTDILNNAAPVDELKASIGNIALSP*P EGAIRNLSREEVARPRRFTPSP
6494	14545	A	7227	3	304	HEEKNEKIRNVGLCEAIVQFTR*YL*VCL *RSVNS*NCCWRIVPNIFF*PL*TFSPSKP AKSLHTQKNRQFFNEPEENFWMVMVFT YTVYLSEIVWVELW
6495	14546	A	7228	1	167	SARGPDGFTAIFYQTFKEELVQILLKQFQ RIKGESSLKSL*ETSITLIPKTRKGT
6496	14547	A	7229	2	334	ARDRAALETVIRRARPELRRPGVQGIPIR VHELKIEEYVQRLQVGLDPQLPLNLA ALYAHVA*EKRVVSILSRILVILVESLI LLIIVLTYGYQLSILCTCSVGNIF
6497	14548	A	723	452	764	LLFSKCRAVEKNLSKEDPHMETIKVAFV MTSGERDTGLTEPMAG*RGSG*GS**DGP ARGHETSLGHRGVSGDGGSGMPSLTAN ALPSISRFPDSVTDSGSAPL
6498	14549	A	7230	1	792	FFYREVKPSLFVDCKILITEIPKES/NRVL QITRELSKMLAYKVSMILKSILFILTREYK KVKMPFNIVY/NNTKYSRINLMKDIYDL YTAIYPSTAALKYRYMCNLQNIARRN*R PPLNKWW/REE*YSWIEGLVVKILVFPKQ IYRFNASPNKSPPLFNKLIPKFP*KYKG RRISQTNLGR/TLQDLKIYYKTTLNIV WYWYEVQRLLPPAPQSAPIRPTCWQLS PSDLQGLKGAEGLTDWGGKQSGTEITS GHLPLSTFG
6499	14550	A	7231	1	2541	
6500	14551	A	7232	560	901	GNPATPSHCSLPQPPTQEGAA/YNPDFF FF*KQP*QPKPVSSQPPWPLSTSLPPACP SCSRRAPAVPAPIQAPSAILPLPGQSVER LCVDPRHRQGPVNLLSDPEQGVETG
6501	14552	A	7233	13	2931	EEGRQQSPAADVKTGLRAPLAASAWPH RCCVRRLLARITMKPPRPVRTCSKVLVL LSLLAIHQTTAEKNGIDIYSLTVDSRVSS RFAHTVVTSRVVNRRANTVQEATFQMEI PKKAFITNFSMIIDGMTYPGIIKEKAEAQ AQYSAAVAKGSAGLVKATGRNMEQF QVSVSVAPNAKITFELVYEELLKRRLGV YELLKVRPQQLVKHLQMDIHIFEPQGIS FLETESTFMTNQLVDALTTWQNKTKAHI RFK

6502	14553	A	7234	3	338	DAWVSVLCCNLSEAKRRINSLSYNQCEN IRRLPSF/RDVWNGENSRYVEKQASEQQ VELLTNERYLMEESQLLLQYLHVYHMN YFLDLTCRPTFYCYLTEAPIG*PMCKGYL S
6503	14554	A	7235	147	380	ASCRFDFFCLLCYRVLFSNLTVFCFAYR YFNIMSFCTFFLYFWWL/FCYDFLL/D YVF*TLIVLVCFPPVSFVMFLI
6504	14555	A	7236	1	257	PTRPDFFAQQHLLTPDKIYHVTVMPCYD KKLEASRPDFFNQEHTRDVDCVLTGTE VFRLLIEEGVSLPDLEPAPLDSLCSGAYA *ERTSHR\GGGSGGYLDHVFHRLSLQFDF S/DVV*VSSHLR**DFFAQQHLLTPDKIY HVTVMPCYDKKLEASRPDFFNQEHTR DVDCVLTGTEVFRLLIEEGVSLPDLEPAP LDSLCSGAYA
6505	14556	A	7237	2	502	PVWWNLQRRTSAGPGTAVPGLAVA*FR QTGLTRSPSSGRDGAGVRDLWNPPPPVP IPL\PLGFHLRGPDSLAEQPSACLPGS/PP CRNGLGQPQQHGLWPG*IGIQRGLGFH GNQGPSPSNLPYPPFLFAAPLHTRHVP /LHHCCPLTWAALPTPLCLWRCSAIQD
6506	14557	A	7238	1	828	
6507	14558	A	7239	2	775	NISREMLQQSKILKVIKKNLVKKCLEFT ELAEDKENYKKFYEQFSKNIKVGVNNH* FSNWPL*FFFFFFNSESLCKEHTLFLQGIH EDSQNRKKLSELLRYTTSASGDEMVSLE DYCTRMKENQKHYYITGKRTLCYSHT RRSYNLVGSVGVFSTQVALLQLVLI*AR* LT*TRSFVLSA*VSG*QEKSELDITLN C*KV*K*LCNTSGETKDQVANSFVRL RKHGLEVIYMIPIEDCAQQLEEF*GK
6508	14559	A	724	209	384	KYETIRYRDSVKGRFTIF*HLTKNCLHLR AIGLGADDSHFYSCANDVADSGTTLFFD S
6509	14560	A	7240	1	2303	QLLQRPVAVPLVLCGHLAKMPEETQT QDQPMEEVEVTFQAEIAQLMSLIINT FYSNKEIFLRELISNSSDALDKIRYETLTD PSKLDGKELHINLIPNKQDRTLTIVDTGI GMTKADLNNLGTIAKSGTKAFMEALQA GADISMIGQFVGFYSAYLVAEKVTVIT KHNDDEQYAWESSAGGSFTVRTDTGEP MGRGTVILHLKEDQTEYLEERRIKEIVK KHSQFIGYPITLFVEKERDKEVSDDEAEE KEDKEEKEKEEKESEDKPEIEDVGSDEE EEKKDGDKKKKKKIKEKYIDQEELNKT PIWTRNPDDITNEEYGEFYKSLTNDWED HLAVKHFSVEGQLEFRALLFVPRRAPFD LFENRKKKNIKLYVRRVFIMDNCEELIP EYLNFIKGVVDSDELPLNISREMLQK/S KILKVIKKNLVKKCLEFTELAEDPANY QK\FYE\QFS\KNLKALEYHEDS\QNRKEA FPELLRYTTSAS\DEMDTLKD\YCTRM KENQKHYYITGETKDQVA\NSSLCGTV FRKHGLEVIYMIPIDEYCVQQLKEFEG KTLVSVTKEGLAELPED\EEEKKKQEEKK TKFENLCKIMKDIK\EEKVEKVVSRLA VTSPCCIVTSTYAGWTANMERIHGKLQ ALKETTSTMGFTWQPKKHLEINPDHSIE TLRQKAEADKNDKSVGILVILLYETAL LSSGFSLEDPQTHANRIYRMIKLGLGIDE DDPTADDTSAAVTEEMPPLEGDDDTSR MEEVD
6510	14561	A	7241	158	405	RMNLDSDGMDDIISQESSLDMEGNYKK AQKNEREAIRLILAL*SFDDGSRIYIS/CE QSGKQIFSPH**GINFQIGLSTWSP

6511	14562	A	7242	3	442	TLLMFNNNVSLTTLTFCMFLEFSLPCTED VPTCGDSCDKVLECGIHRCSQRCHRGPA T*VIYFHAVFQAGPECLHCEEGCSKSRL GCLHPCILRCHPGECPPCVQMLGTAESA VLPQACHCPQFCLQSPFFLTHKEPQSSW SSG
6512	14563	A	7243	2	322	SGWSLTEQDPYNNIVRTAIEAMAAVFGG TQSLHTNSFDEALGLSVTKSSLIPFSLHF LFS*QFSLSYISIFLFIFFYFYLSLLIHFY IFYLISIFLFFFLFIY
6513	14564	A	7244	1	361	RELLAFWQNFKLRPQGPFFSPAGPGGEKK R*SLPKTPPKGGPPGP/SPNGRLPSGGQLP PPRGG/SPQGSSSLPKGPQGWGPFP*RS PCPPHRIGVPQVSSSPTPGLVFPRGPLNPG NLGG
6514	14565	A	7245	115	313	LVRSLTSLPHSPNP TL SLPS*LPPYGPVY LSHYPPSPITSLTHPPSPSPPTSLPPASPI TPTS
6515	14566	A	7246	2	326	NEGECRKDVEMEPVLQAEKTNFQNHKG HEFIPTLWHFPANCDACAKPLWHVIKPP PALECRCHVKCHRDLDTDDLIFPCN IRYDVSSTLRYSL*LLHFSDEITII
6516	14567	A	7247	1	364	EHTRAEDHMLEEREER*RAERAQREE*L PEYQERMKT*EADRNIRPRELEIEERER RTEERILGDSSLSRKDSRWGDRDSEGA WRTGPEAHSEWTIGSPQMEWRP*EWLY DDRSYTGD
6517	14568	A	7248	86	512	RGRVEAAPGYGSHLCHNFLPCTYWQKF GQPPGLQRTAASYSSDTMLGKAETHPT FAFFPAQGPCKESWQSRDTSARSETLGT ACSYNTGNNWAGAAAHGDTEDLQWLQ RKRE/RSEKTRTDLKGVRTSNGTARDD NCAYSP
6518	14569	A	7249	2	703	PDCPSRPT/YARGTSPGNKTENAHKGPKS VSSAPKMR*SLQDTG/REDTREPVRFHID TGTKEQTVIFAD*KIAGRCKT*GQFPRQR PHGGGSTPQLFSAAGTSFPAFPVAVKV HGFKTSPTGRGGGHWANTRISFSWLATK KRESERKTRTDLKGVRTSNGTARDDNC AYSPHRRERGAPPAHGLYRRSVCARKN HIVLSKTGGRSVRRHDHRRSRSWRLRPG VSHHMRRSQ
6519	14570	A	725	68	362	SLPTIRECIYIHVVHAGDHIGNACWELCY L*HGIHPDGHMPRDLTIGGGEDSFNTFFT ETGASEPVPRAAFADLEPTVIDEVTVTY GQYLQL*QLIK
6520	14571	A	7250	148	357	LGIDLTKKVKKLSKKNYKTLMKKIEDDS N*KDNSCL*IR/MTILPKAIYRFNTISVNIP MRFLPDADAWADAW
6521	14572	A	7251	1	389	RGAQAIIVF/NLNDVASLEHPSKWLADA LKENDLPSVLLFLTRAQYALMEKDALQ VAQEMKAEYWAVSSLTGENVREFFFRV AALTFEANVLAELEKSGARRIGDVVRIN SDDSNLYLTASKKKPTCCP
6522	14573	A	7252	1	144	
6523	14574	A	7253	174	809	DQRRGNWAYECQWEGPCRLTHPLLSTS HGRQWLADALKENDPSSVLLFLVGSKK DLSPVVPVGGPLPSLVRECPLTLAFPQTP AQYALMEKDALQVAQEMKAEYWAVSS LTG/EVGGFRALL*HSCALLSLLHLQLC PVSPDPALPLSTYLLSVGENVREFFFRV AALTFEANVLAELEKSGARRIGDVVRIN SDDSNLYLTASKKKPTCC
6524	14575	A	7254	1	524	MERFEVLGIPFSLQLWDTAGQERFKCIAS TYRGAQAIIVFNLNDVASLEHTKQGV AECLKEE*PSRVVFLGFKKDLSTPAQV YALMEKDAFPGGPRRLKAEYWAVSSLT GENVREFFFRVAALTFEANVLAELEKIG

						GLDVIGMFVRINSDDSNLYLTASKEEAP HVCP
6525	14576	A	7255	1	258	
6526	14577	A	7256	2	562	RCFARYRPVHADPLYCQGHAAAPVGYST VSRTHAPGG/VQLPPPPYTA/GRGAQVG RGCSPARSGAWPHRSGAVDHPLTQGDH TAPDHSSGLNDHSHHGAGARHLPPQG HAAWPP*DLNPCRTQPS*PSHSPRPGSPL APVAPPWALGWNQEYFPKSDSLLLLAK LYLIQWVFPCTVDFPNVINFINIK
6527	14578	C	7257	30	323	MRLQLPSTSHLPVKRGXKEGEAVVLPEV EPGLTAREQEATPRPRETTQLPTTHQALG WNQEYFPKSDSLLLLAKLYLIQWVFPCT VDFPNVINFINIK*
6528	14579	B	7258	249	374	RLRWPLREVQGSVDQRCCTTKPREPVSGI RYCDFLPGVYDCT*
6529	14580	B	7259	77	867	XAGALQDITLSQQTPTSTWKDTQLLTAIPT SPEPTGLEATAASTSTLPAGEGPKEGEAV VLPEVEPGLTAREQEATPRPRETTQLPTT HQASTTTATTAQEPATSHPHRDMQPGH HETSTPAGPSQADLHTPHTEGGPSATE RAAEDGASSQLPAAEGSGEQDFTFETSG ENTAVVAVEPDRRNQSPVDQGATGASQ GLLDRKEVLGGVIAGGLVGLIFAVCLVG FMLYRMKKKDEGSYSLEEPKQANGGAY QKPTKQEEFYA*
6530	14581	A	726	1	1254	
6531	14582	A	7260	93	1049	TSGSHSGITQFLPCFSGAQPTGQSP*KR SPGPQHRAARCTHFEGSPFFGSSCSRPR NRAWVSAWWAGS*RPAQWSQELTQTP KQAGGQWRGPAPSRTPMRRLPEPPQHP KEQERHGVALEQSR/PRTLPPALGHTCV* DQPSAFPVPAQPWGNPSMGS/HERSWV CHVL*LSSHPLIQRRGSPCPPVGLGISP SPCPGGQPRPQPDSSLLGA*ASGFSGTPK FKGPGTHHGPCQPLSPAGLGSGLGEDL EAVGRTQPSNA/PLAPGQ*ATGGSALQPP VHTASNAPGPVSPDAPPPLDQAQRLQD QQAkakPCPR
6532	14583	A	7261	2	643	PRVRLNGIVDR*VLGCLPCYDLGIFTDRD LGVHADAHDLENLAKDLIA**IPFLAEGI RIHGDKVTVALRPFHERMEACFKQLKE MVENEYGVIMPSSLD*RGIRPRSMVR AFTMPSSSRPLSVASVSSSDSTPSRPGS DGFALPPLLKKMLSRSHDKLYKDDLD DKKDYMTYNWTCRQFQISRDKMKRTD VSLYIMLVSPNPNSY
6533	14584	A	7262	59	339	
6534	14585	A	7263	2	519	ILFLFLFYFISFLRWSFTFVAQAGVQW*D LDSLQSPPPRFK*LACLSLLSSWDYRHMP PRPANFLYF**RWGFTMLARLVLDSPQ/ CDPPASASQSVGITGMSHHAGPTMKLLN PQSEVIFSPRNSHSTLLTPSRHLPHPISIS TWCHYAPLHTVSISAEAPWLFACQS
6535	14586	A	7265	3	317	EESFTAHLRHRGVQPFPCGQCDKAYG TQRDLKEHQVVHSGARPFACDQCGKAF ARRPSRLHRMTHQIGQLPMPLAHALCG AAPGSQGFLWNHMLHT*KKPFL
6536	14587	A	7266	285	672	PLCTREKSEYMCTSYSLARSRVGQTLCK GVQWRHLSSL*PPPPGFKQF/SCLSLPSR WDYRCPPPHLANFFYF*QRQGFTILARL ALNS*PRDPPASASQIAGITGVSHRDLII NFLDFEGYT*SATDS

6537	14588	A	7267	3	231	QIEQLHRRF*AA*/RGDQPTIRKENFNNV PDLELNPIRSKIVRAFFDNRNLRKGPRGL ADEINYEDFLTIMFYFLSI
6538	14589	A	7268	88	360	KINMGILLKL VYRFSIHPVKTPAGLF/TK NEQ**TEFDKRLKSIWKCKE/PYSTRIMF KKTEAKGLPS/P/DFKTYEATEFKTS*D QQKDRYKE
6539	14590	A	7269	2	355	RRLFFFFFFLRRSL/DSVAQVG VQWHNIG SLQAPPPGFTPFSCSLSPSS*DHRPPPCP ANFLYF**RQGLTMLAKLVSTS*PCDLPA PAHQSAGITDMSHRARLIVSLFKRQKTY GNN
6540	14591	A	727	65	1552	PLKAKMGKEKTHINIVVIGHVDNGQVSP LLGHLIYKC\GGNDKRTIEKFEK\EAEM GKGSFKYA*VLDKLVAER\ERGITTDISL WKFET\SKYYVTYPFDAPVGHQRLLSKN MIYRGHLKA*PGLGGPLFGGVLP*LFAA GVWWNLKAGISKNGVQ\TREHALLGLHT WVWKQTKLFGVNKNWIST*GHPTAQKK ILKEIVKGKSALTLRKIGYNPDTSILCPIS GWNGDNNAWSPNANMPWFQGDGKVT RKDGNASGTTLEALDCILPPTRPDKPL GLPLQDVYKIGGIGTVPVGRVETGVLKP GMVVTFGPVNVTEVKSVMHHEALGE ALPGDNVGFNVKNVSVKDVRRGNVAG DSKNDPPMEAAGFPAQVILNHPGQISAG YAPVLDCHTAHIACKFAELKEKIDRRSG KKLEDGPKFLKSGDAAIVDMVPGKPMC VESFSDYPPLGCFVRDMRQTVAVGVK AVDKKAAGAGKVTKSAQKAQKAK
6541	14592	A	7270	1	336	RGDTGRTLAQRGARSSG/LPTV/LNPGRQ LTSAG*PH*YGKARAAMPPTSLVRPVLK VGHSPSPEVSGSAAEIAPWTISSPLYNPSS LPGPASSPMPIPNSSPLASPVSYTVLV
6542	14593	A	7271	1	371	RSRPELNDYKDKKAATKNVQKK*MQRQ KG/DIAIDATETQRIIRCYEYHNKMSSSS SSSSSSSSSS/SSSSSSSSSSSS/SSSSSSS SSSQSLPSKKNSGSEGFTAIFYQRYKTPL ILKLFKK
6543	14594	A	7272	2	406	ARAARVFLHRTSLNLSNGGTQC*KTMV VHDDEYSEPCMTPSKEGTLIVRQTQSAS STLQKHKSSSFTPFIDPRLLQISPSGGTV TSVVGISCNWMRP*SNKHYPTQKGSLSF* ISTHTYTPQSAFCVIFLHYC
6544	14595	A	7273	1	165	GSLPLLFNIILEVLAKAIRQEKSQNEKE KV*LSLLTDHMI/YM*NPTVKKLT*KL T
6545	14596	A	7274	110	409	
6546	14597	A	7275	53	930	ARSYRQLTMEANGLGLQRIHTDTYPHPH LIARPQGFPELKNDTFLRAAWGEETDYT PVWCMRQAGRYLPEVRETRSAQDFST CRSPEACCELTLQALRRFPLDAAIIFSDIL VVPQMFSPPPALGMAEVTMVPGKPSFP EPLREEQDLERLRDPEVVASELGYVFQ AITLTRQRLAGRVPLIGFAGAPWTLMT YMVEGGGSSTMAQAKRWLYQRPQASH QLLRILTDALVPYLVGQVVAGAQAQLQF ESHAGHLGPQFFNKFALPYIRDVAKQVK ARLAREAGLAPVPM
6547	14598	A	7276	86	552	KQPQPTAPLWQPLKLSSKLGLAPGHGPC CLHLLSALGSLPGLVPWLPSRVGC/SS*G LLLTSPQPSADPGQRRVALHHVL*VEP FASQEAQPPPSLP/WW/PLRGDTESQGPS PLSARCTHPGCRSVRGRWGRARGWPAR CQGAGGPGGWRTTCPCR

6548	14599	A	7277	176	779	NSVSKLGLAPGHGALLPPPAERSREASQI PRGRAPGVHYLCLKQPRRGLLGPQGNE RPLPSKPHLCAGLCLGGPGPTSPLPFETIR NWARRPPEA*PQGACI/LLSLGDPRGVG *PWV*TPGGLVFWMSLWHFGPQLKPPPL PRSLRPRSLDLLGRKRHQQDEKPGGA APQMRAL*PVLPLPPHGTAPQLVTATR KP
6549	14600	A	7278	32	492	FALVGQAGTQ*CDLGSVQPPPLGFK*FSC LSLLSS*DYRHVPPCWLFVFLVEQGFVI LAKLVSNP*PQ/CDPPILASQ/SAGITGVS HCAW/L*LSFSFFC*DRVSVTQAGMQWH DLSSLQPLPLGFN*FSCLSLPSSWDYRCV PPHPANFFIFSR
6550	14601	A	7279	19	253	LENSFLKTLPLAIACRNIKYMNLTKCESC KLREKDLNKWGSTPCSTIGKLRIVKMS FLPKLIYKSQKTFFLQTLIK
6551	14602	A	728	344	803	KRDPSLSAYPFFKCNLLSTLHFMAYAS LYFIYTEPVFVQHDWLHASKAL*IPFHISPS TTIPLTMVSQPYTEHYIVTKLGEFQVSK GNYIHKRFCFIAQFTI*LVTQPTMLR*ISD YLDKYIGFCPPQPMKQERHTYSPPYQGC VYSVVQS
6552	14603	A	7280	3	1023	FLNWKSKILYSTDDMIYIENAKESRKKL LE*VN*SKLLDTRSMYKSNAFLYTSNNL GKPAF*KPYPLAIACRNIKYMNLTKCES CKLREKDLNKWGSTPCSTIGKLRIVKM SFLPKLIYKSQKTFFLADIDKSCFF*DSFT PGLPRLEWPWPRSQAHA*KPSNLPGSSNSP GLSLPSSWDSTSACHRRLANFFVFLVEM W*CMPTVPTTWEAKERAHLSPDVRGYIS CDCATTLOPGQONEISASNKTIVINIVSY WCKVIHTRIKWCPEQTTSMSLRVFTNL* RLGHWESRVSTNRTEPTNHTDKKVNLD PYHIWYTKMNSKWITDLNVKGKTIKVP
6553	14604	A	7281	1	407	DVCKPDLTVGLRYAPHQYKSVVATNLP EAKYWFLNWIADLSKAAPRNNDVALGTS AQAYYGYRKQEQILL*EEDALTGTNESL ERQMREMEENFAVEAANYQDTIGRLQD EIHNMKEEMARHLREYQDLLNVKMGF
6554	14605	A	7282	1	3003	MNIDAKIHNIKILANRIQQHIKKLIHHDQV GFIPGMQGWFNSTKSNVIOHINRTNDK NHMISINAETFDKTQQPFMLKTLNKLK IDGTYLKIIIRAIYDKPTANIIPNGQKLEAF PLKTGTTRQGCPLSSLLFNIVLEVLAIR QEKEIKGIQLGKEEVKLSLFADDMIVYLE KPIISAQNLLKLTNSNFSKVSQYKINVQKS QAFLYTNKRQTESQIMSELPFTIASKRIK YLGQILTRDVKDLFKKIYQSLN
6555	14606	A	7283	2	178	PRVRWN/RKVQKQIISIHYGQ*IVDKGSR TIQ*RKNSVFN**C*DK*IFTCKRMNLYL YFVSSSSSSSSSSSSSSSSSSSL*EENTGI NLHDLGFGNGFLDMPKAQATTA*LYL YF

6556	14607	A	7284	699	2526	MQYNIFQVLYLDELHGILGNLTINKFIH RSIVANNLDDLDEKTHQLTKLAQKEKN PNRPVTSKEIEPVKNLPVKESPLNEFT GQ/YYGQTY*RKELTLILLELSQKMEEKG /V/IPvTFYKADITLTPKPKDLTGNYRPI SLMNIDAKKLKILAGQIQQLIKMITQHDV QVRFIKEMQGWFAHIQMSIDVIIYHINRM KGKKVHMITSIDKKKHLTKIQHPFMVKT CKLGRKGNFLNLIKTSIKTHS*QHNSKTL KIFPLIS*KFLISPLLFNILEGLARAIROEK EIK*IQIGRSKTTFAENMVLYIKNPKEST K*FRLI*KFSNVAGCKINTQKSKNLRG N*/RQF/PFTIT*KRIKYLEINLTKKVQDL TEKYKTLLKEIKEDLNKWK/NILCWQVG RLNIVKMALLPKLVYRFNTIPKIPVT/LF TETEKLTLEFIWGLQV/N*RYSSLFKTILN KNKVEGLTFSNFKIYCKATSIKTIVLCWY KNI*SNRVEWKVQKQITPIHLWSIDFWP RGSRTIQ*RKNSVFN**C*DK*IFTCKRM NLYLYFIPYIKVNSR*IKDPKCKSVNPIKL *EENTGINLHDLGFGNGFLDMPKAQAT TAKKKKK
6557	14608	A	7285	2	577	KKIKNIKGSIQQEGLTVVNMYPNDKPS TYMKQKLT*LKGEVDNSTLIVGVFNITISV VDRT/SQYLSKEI*DFHNTINQLDLTTIYR TLYPTMKYTFSSIHRSKIGHKLSLN*F *KTA/NIFPDHNGMNLVIIPKKKTGKFKN HRN*HTLNH*IKKETTRHWLKITPRLWP WQVRVFGAQLQGPQLTAR
6558	14609	A	7286	17	377	QRKACAPRAWSGDPSACRPSVRS*GSTT *G/KPVNFDDYGDYIPAVNLKTFLEELA ESLLTFQAYDQILGITCEYLPWRRSGGLS PHMLSLIYWPMVRLWGGRGDVYPSCYC CHMALYGM
6559	14610	A	7287	1	893	SISSQQT*SSWAPCYRSLPASTWASSLCS SSSLISFSFSSVYSSPPGSSTPLASLSAFF *PLDFSSLASVSSLLPSLNLTFVSWLPPAS PLSSLAFFPASTLVSGLPASSLMSSLPFGS ACLSPTSQHACSS/STLSQSLPSTSCCLS LQTP*TLPDWGFERSQKGT*VS*ALRKTS SPFSSSTSGLGAESREQQLGAKTNCASS RDRSSRCGSTENSST*GPTPRSSSR*PIPGS SSPGEKAAPAASAWAASPSSAPTHSGYE LLESSRKEKESCTSWDSESSRAGAKSSGP ES
6560	14611	A	7288	827	1393	ARCRQAREDGRLVQRLCRRGHFVPLQH RRGAQERAPGIAHSSCAAEPRLSLRTDI SSALVWPRASCARSCPEMGPPLKWKAS GA*LEECPPLSGSPRKNLD*PPGLEEPS RLEGGTPSSALLKG/PAPTYLPPYALDL PKPTSA/VQHSPSTYPPHVLPPIPTPSSWR VVAVGALCSRQDNLHDQPRL
6561	14612	A	7289	104	464	
6562	14613	A	729	209	372	KRKKILRINKTKS*FFEKINKIYKMLTHL RRDKRQKKSEIKKGDITTDTEMKK
6563	14614	A	7290	2	394	PRVRNHPIQKWAKKGLDLSHLSKEGPQ/A AISHMKRCPASPATRE/VQIRATGETHLR GCGNIGTLTRC*WGCK/LLQPLWKPVW WFLRSLSIGLRCD/PVATPLLSV/WPQAC KPGTQRDLHTTVFTAALFTVAEQ
6564	14615	A	7291	2	344	DTRTHVAEEDKLAIIVEPEKRGKYVWVF DPLDGSSNIDCLVSVATIFGFYITNSSD*P SFNHA\ST*RNLYLVSLPFLAFLSTFHL SFLFFFLSFLSLFSYLFFLFSFFSS
6565	14616	A	7292	1	348	RYRSGIPGRRTRAGETPSLLKIQQPG/GD GARS*SRLRLRLRQENRLNPEGRGCSEL RLCHCTPAWARE*DSLKSKKKKEFKIPIY FLTLLWDVFRTQYTYISIPMCLLCGEMVT

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6566	14617	A	7293	10	436	EYYRFLEAKENRTATY*NL/MDHAAKAE LRGKFISYAYIKKLEKFQIKNLTMSKK LEKF*IKKSSNVFQARKEQTKPQISQRK *ISEKE*TKLRLNQCHKSLKQPLLS*TK KDQNK*MRKEKGDIKLSGRVGRPEYLQ T
6567	14618	A	7294	2	403	CPTSTSTSWTMWGPACREHL*PLPTFP GQQPNTLP/RPTLRP/SP*TPTSACS/RP*/P AVPSRPSHPSHLPSPCPPQFIFNVPHL**G GPHPTHNLPPNCPALLQLPGFSTLPRLS P*TPPTTPICHCVSRFLAP
6568	14619	A	7295	27	88	CREEDDDLVESEDS*QWGESLKRVSFTL LDDEATEDAGDLNVKKSDEVKSFEKR QEKESA*VGRKMMTWLKVKTNNGEK A
6569	14620	A	7296	109	409	KFKNMWKLNDTL/LNNHWVKEEIKKEIR KYLKRNNENKNTTYQNL*DSAKPVLREFV VINAYIKIEEGSYISNLTLYLKDLEKEIKA KVNRRKDIRITEIN
6570	14621	A	7297	13	811	VCRRWSGGLARRFGSGCCSSCPQRR ARRSQVQNGKYL/FDQINRSLNYPCCSS QNCSCYHGVIEEDLTPFRGGISRKMMAE VVRRKLGTHYQITKNRLYRENDCMFPSPR CSGVEHFILEVIGRLPDMEMVINVRDYP QVP*MDGACHPS/PSPSVRHQS/DHDIMY PAWTFWE/WGTCCLANLSYRSWTEGPL QRRSGKVS/TQWPWKKKNSTAYFRGSR TSPERDPLILLSRKNPKLVDAEYTKNQA WKSMDITLGKPAKDVHLVDH
6571	14622	A	7298	22	426	IFSHYFFQKFLRLPFIMFMHLLGCKVDL FIFQCFHFLVFYFGLFYLLKFCYTFKFT NCFLYSFSFTVHLI*YIFPSDIMFLYVEV* FKSFF*RYLPLCHVHAFISFLNILISLFSS* **LTIFYCPYLLFYH
6572	14623	A	7299	131	353	IFLPEKKLYKLEKWDRAFDNT*NF*T*K/I HTGEKS*KCKKWDRAFKGWPHFIIGKIV HTEKNFYKGEQCGKTFN
6573	14624	A	73	702	1281	AVEMYLVVCGTV AISRVMSAVCVLRT WSARNAGQLNCFVTFQPCSNVHVL/KGP NYVCFGAYPSFKYSHPHNFVKTNVAVC GQLVQFRFPDTEEGIRKVTV/KCYVKEG DTVSQFDNIGKVQSDKASVTUASPYDGV I/RKL*HSLDDIAYVGKPLVNIETEALKGT VNLFYQIDYCPFFVIGSQLKVTFKKKK
6574	14625	A	730	24	452	APSPDAMG/HSLWGVNVEDAGGETLG RLLVVYPWTQRFFDSFGNLSSASAIMGN PKVKAHGKVLTSLGDAIKHLDDLKGT AQLSELHCDKLHVDPENFKLLGNLVT LAIHFGKEFTPEVQASWQKMTGVAS LSSRYH
6575	14626	A	7300	131	418	IILTEKKLYKLEK/CGQGF*QHLKLLNIKN HTGEKS*KCKKWDRAFKGWPHFIIGKIV HTEKNFYKGEQGGKTFNEGSHLIAQESI YT*KKLSKYKD
6576	14627	A	7301	305	326	KTFRSQKKK*IHW/DYIKILNFCARKNTIS KVKRQPT*EKIFANHISA*G
6577	14628	A	7302	3	416	FLR*IGSHSVTQAGVLWRDFGSLQPLPPG LKLFSCLSLSS*DYRRVPPCLAKFCIFS/ VRRGFAMLARLVLS*L*VVCPPACHVD LYN*SASQSAGIKGVSHHTWPHKYHLK NLNVFSYQSKSTVNNQLSSQILLN
6578	14629	A	7303	3	474	

6579	14630	A	7304	2	1050	REDTKAAVLLHLLHNVVRPQDQTVVVFV ATKHHAEYLTELLTQRVSCAHIYSALD PTARKINLAKFTLGKCSLIVTDLAARGL DIPLLDNVINYSFPAKGKFLHRVGRVA RAGRSGTAYSLVAPDEIPYMQDLHLFLG PLPHRPPTPQALRVWAGVDGHAGVGV PQSVVDEEDSGLQSTLEASLELRGLARV ADNAQQQYVRSRPAPSPESIKRAKEMDL VGLGLHPLFSSRFEEELQLLDLVNSIKN YRSRATIFEINASSRDLCSQVMRAKRQK DRKAIARFQQGQGRQEQQEGPVGAPPS RPALQEKQPEKEEEEEAGEKCEDIFSEVG GRKRQRSGPNR
6580	14631	A	7305	3	872	PKSWNGPPHPPGHRHSRSHSNFSGCSVD EERSRTSKDSSSPVNDHRGRQ*MR*KNP FAASSRSTSSSSSSSPPLWSTAGRTPT TRSGPSPALDKVQIYMEHLLATAST/EPA GSAHVPGHLFRAE*VLPAL*GRALLGTP VTNNLLGEIAKPSLSQSKRLKAAS/AAKY PHDVVNHLSCDEARNHYGRRGQPHPPH PRTK*KNGSPTPRSCRARCCST*VSPRRT RRAPGDPLVLP RP*GPSGPLNTSVDSSQ KPASNPGDVQNHPPGGLLVGNCNSEPGA PSAESFAV
6581	14632	A	7306	99	433	KLKVKGGKRYRMLTLIKRK*H*IKIQNSC VFLYTSN*ELENK/IFGRYVSFMA*KIKS/ LGILMKDV*NLHSEDYERLLTKIKDDSN KWTDMMQFTRIR*YHKMLILK*PIIY
6582	14633	A	7307	18	146	LHDSNTRSPQFQKSLGFSTGRHRCVP*EG L/RSVTQAGVQWPIHSSLQPRPPGLQSDP PASACQAARTLCRWY
6583	14634	A	7308	1	240	LVCLSKSECLQPLFYHHLTLKNCQFHLCL RILLHPQC*KQALRHGKACPLCHCCSHA ALYMICLAKED*KTFDPQELMYSL
6584	14635	A	7309	2	1790	ANQLQGEVVRFFVVD CRPAEQYGAGHL STAFHLDSDLMLQNPSEF/DTAIL*SLLEA QKQSIESGSIAGGEHLCFMGSGREEEDM YMNMLVAHFLQKNTEYVSIASGGFMAL QHHLADINVDGPENGYGHWIASTSRSR SINSVDGESP/KWLCKLRWILKHQV
6585	14636	A	731	99	641	APSPDAMGHFTEEDKATITSLWGKVNVE DAGGETLGRLLVVYPWTQRFFDSFGNLS SASAIMG/NTPKVKAHGKVLTS LGDAI KHLDDLKGTFAQLSELHCDKLHVDPENF KLLGNVLVTVAIHFGKVEFTPEVQASW QKMAEDVTGVASALASTYPLSSLAHDS ELSRDRLLFCKQIKI
6586	14637	A	7310	1	1424	ARILLDNDHYAMEKLKRVLEYLAVRQ LKNNLKGPILCFVGPPGVGKTSVGRSVA KTLGREFHRIALGGVCDQSDIRGHRRTY VGSMPGRIINGLKTGVNPNPVFLDEIV DKLGKSLQGDPA AALL*/EVLDP EQNHN FTDHYNVAFDLSQVLFATANTLATIP AALLDRMEIIQVPGYTQEEKIEIAHRHLIP KQLEQHGLTPQQIQIPQVTTF*UITYTRE AGVRSLDRNLGPLCRAVAVKVA*GQRT EPIWTVLM*LREKVAENTS*KMKNLNL /RDTTDLALPPEMPILIDFHALKDILGPPM YEMEVSQRLSQPGVAIGLAWTPLGGEIIF VEASRLDGEQQLTLTGPSSTVMKESAH LAISWLRKQRKESTKLTNAFGSFDLLDN TDIHLHFPAGAVTKDGPSCWEVTISNLSR PQLFSGRLVRSDVAMTGEITLRLGALPV GGIKDKVLAHRA GLKQVIIPR
6587	14638	B	7311	169	379	VSQRLSQPGVAIGLAWTPLGGEIMFVEA SRMDGEGQLTLTGQLGDMKESAHLAI QLGSAATQRSTQLTNX*

6588	14639	A	7312	3	411	HHFLTCRIKNKINYTIATKTIKYLRLNLRN F*SLTKPKLLKDIKVDLNKWKNNISYSWL R*FKLTNISVLPILYANKIPI*KINTFFIKLD KLMPKFI*KNKHVKIGRK/ITKKKSYKGI LTLSDIKTYKVSIIKTV
6589	14640	A	7313	2	423	SFPLPFPLPPCSSPOGPQLLRKAITRPWPG TCPYPASTQVGEFTLRTRPQLSVGV*EEG CPYPSPADSPMSEDPGAAPPHHPRSP*R NR/C/SSKGKTAVFAWPASHLASPLQPTG LPGKRNNMLSVPNNTPOPDWVAPE
6590	14641	A	7314	2	416	ILSTLFQICHCLWSSQLLLTSHCQYHYCC SSKNKNLAWLLLKLFLYNLEA*FIHLA VIFLYLSCLGFTALYEFVVCFLLLVLSY SVLLFLSF/LFWNFS/THILELLCPICLLNF VLLFMYFSFSLQFGYFLFLCLQ
6591	14642	A	7315	2	411	RQGLTLSHGPEVQWHDLSLQPLPPGLK KIFPPASRVAGNTDVHHHAWLVFFPFF VRRGFAIVAQAVLQNPGLQAICPPMASP KCWDYRRGPPHPAQE*EHFLRSLPSTGE SYFGEL*HISTRKIKILVHFEETN
6592	14643	A	7316	2	333	TEPALSPRLECSGTISAHCKLR/LPGFMLF SCLSLP/SSWDYRRPPHPAGFFVFLSRRT GFHC/RLARDGLDLLTS*SARLGFPKCW/ DYRRDDPMPGPVSFNRMENLMETVD
6593	14644	A	7317	3	232	AASTPRPLRFLPSPTRGLVPN*RPRRRRT SSAANTPAPEPAPTSARPTRSNTHRLSP WSSRPVTEEMQSAAKHNG
6594	14645	A	7318	1	385	IPWSRVG*NHPVKNAHLPAVSKFKTISI KKPPLFFPRMEKTIKFLWSSSSSSSLPV *SSSSSSSSSSSSSFSSSSSSSSSSSSSSSS SSSSSSSSSSSSSPTHKIKPNTYRQLIFD KANKN
6595	14646	A	7319	2	409	DRKEERLRSRSGAAATMSSGGKGVAE WDPLPCLDPELWDQFDNLNHSLEKFI SAKERTIEIJSYTKQLRNLLKTCQPKRN WKEKEYIT*NSPSLPVNKMSDHARQH*V IFFEVLNFQITVELQGHVQNOQOE
6596	14647	A	732	154	411	AGQPGPEGIQLG*PQIRDKGDQMGPHP W*VCGTLTPNTSF*VFCCVAGRDGAPGV KAHFPAQKPWDGGFPGP*SAGVGPPPI PR
6597	14648	A	7320	58	501	DPRVRPGTRGPRSGTAGGETTWEGPFGV IVRVLMFLSYELRAAELGEVGAGGPRGA RRPSQTETAA*PASRFVRGLGPQTLRPTS PGPRRSRPLLGDPPRRRVGGASFPPTRN GSGAWALWRRPCWECSSRSLRTTKLF LFFGFG

6598	14649	A	7321	381	2378	AASMEHIQGAWKTSNGFGFKDAVFDGS SCISPTIVQQFGYQRRASDDGKLTDPF*T SNTIRVFLPNKQRTVVNVNRNGMSLHDCL MKALKVRGLQPECCAVFRLLEHKGKK ARLDWNTDAASLIGEELQVDFLDHVPLT THNFARKTFLKLAFCDICQKFLNGFRC QTCGYKFHEHCSTKVPTMCVDWSNIRQ LLLFPNSTIGDSGVPALPSLTMRMRRESV SRMPVSSQHRYSTPHAFTFNTSSPSSEGS LSQRQRSTSTPNVHMVSTTLPVDSRMIE DAIRSHSESASPSALSSSPNNLSPTGWSQ PKTPVPAQRERAPVSGTQEKNKIRPRGQ RDSSYYWAEIEASEVMLSTRIGSGSFGT VYKKGWHVNVAVKILKVVDPTEQFQ AFRNEVAVLRKTRHVNILLFMGYMTKD NLAIVTQWCEGSSLYKHLHVQETKFQM FQLVDIARQTAQGMDYLHAKNIHRDMK SNNIFLHEGLTS*KFGDFGFATVKSRWS GSQQVEQPTGSLVWMAPEVIRWQDNN PFSFQSDVYSYGHRICMELDGRGELPYS SH/INNRRGFRSIFHGWGRGYVSPDLSKL YK\NCPK\AMKRLVADCVKVK\ERPLF VQILAASIELLOHSLPKINRSASEPSLHRA AHTEDINACTLTSSPRLAGLPS
6599	14650	A	7322	3	419	EPQWQALMPEKEPARQSRGGALRTDSS EPSRNEVKKTISFIILAKRTYLEIYATQDA *NLCTEKYKIFLKGIKEYRTKWKDILQS WITRHNVMKALP/KFTYSFTICIKMPALS FYKLILIFMRKYKGCRIANTI*RER
6600	14651	A	7323	3	222	DAWVTSTNADKEFEKIQHPLMIKLSSK* VYNMSYIYPLFKIHKGIYDKSLVNILNVE KLKAFFLRTGTREER
6601	14652	A	7324	2	395	GRQPRWRLWGQLLSSGRRPLEPGWHRP SRGERGHASFPPEPGPCPGPQQRQPG*V PVPEP\PPKGGPEPRSSGRKASGPSAQPPP AGDGARERRQSQQLPEEDCMQLNPSFK GIAFNLLAIDICMSKRL
6602	14653	A	7325	63	451	KNQEQUESEETLPNLFYKASITLIPKLDTO K*KKRKEKKRKKKK\EN*KPITHRNIYAK ILNKILAHQIQYIGKJIIHHDQVGCIP/GAF DKIQYRCMIR/TLQKMGIEGTHLNIIKAIY IRPTDSIENREKP
6603	14654	A	7326	2	137	SKAKINGWDYI*LKCWYTAKKAISGVKR QPTW/EKIFAN*SSDRR
6604	14655	A	7327	755	1287	GGWDFAPAEGRRERLAPCQIWDPSCLPTH W*PLSGLLSRPPPGTQSPQLSPYSCAKSW CPCPSLSPGSPMN*PSVPRTTGPSHPEPSA HGSHTSPIVATTERAPERISGGDSLGLSPS GLEGVNREPLFTPPSSSGSSVSLMSSTP PAGHSAA*SPQPGRCSGPAQGGQATSRV RGP

6605	14656	A	7328	1	2239	MEERKKGHKEIHLRRLKVRILSVRMSAIK ESPRLLIGNQEPLKQLKQESKMNRVYFN TDYSGCIRLIQSRLSHFPESGQQNPQPY MRKFKTPLMIAEEKYRQQKEEIEKQKQE SSYYNIVKTQSQNQHITEVEKEMPLQKT NEEVSLSGIDSECTVVQSPGSGSNARIL GVCSDNQLSTTSPETVAAKRLHHVLAAS EDKDKMKKEVLQSSRDIMQSKSACEIKQ SHQECSTQQTQKKYLEQLHLPQSKPISP NFKQSEIDVQTFKKQYLKTKKTEASTE CSHKQSLAERHYQLPKKEKRVTVQLPTE SIQKNQEDKLMVPRKQREFSGSDRGKL PGSEEKNQGSPMIGRKEERLITERKHEHL KNKSAPKVVKQKVIDAHLDSQTQNFQQ TQWQTAESKAHEHKKLPQPYNSLQEEKC LEVKGIEKQVFSNTKDSKQEITQNKSF SSVKESQRDDGKGALNIVEFLRKREELQ QILSRVKQFEAPNKSGLKTFQTLNLTIP GWLISEDKREYAVHIAMENNLEKVKEEI THIKTQAEMLVSYENIIQTAMMSSTGTG KPANGA/ALVSTKTSPKVSNNHVSNNEN SEQKEN*IAKEKTVQHQAHADEATVRS HVKTHQEIKLDDSNIP/LP*KHSPSPPTFI TIESTARRTENPTKNELSQSPKKDSYVEP PPRRPMSQKSEIHRANTSPSPRSRSEQL VRLKDDTTAKLSKGAIPCAATVPVIVEKR SEIIMSPATL
6606	14657	C	7329	110	298	MPWISEGRATRPCLRVPSARRGDEGLHQ RATANSVYKSRNTWLCWICKPPQSSSPK ISEKRF*
6607	14658	A	733	233	353	STAPGSGRQRTVSEEP*PHSTEDGQRGQ WGGTSLQHPAQD
6608	14659	A	7330	127	742	LVRVFPWREDKVWWHCQE/CRPKR*KS KPGLSGPV/APGHSWDSTETTEATGLLLI PGPTRRPPTLYHTPCCLSVPRWCRPSSPL LAEGTRRQGLVALPSLIHQIPMGLEVW GLASPPR/PGRKWHR*KDKMATQALSVC RA*TCILPPSTKTSRPRPHSTPRGPAPTTV QRNSRRVNGSPESPLPRPGLPVSEPHVA GTRTARDG
6609	14660	A	7331	2	433	FEDIK*VIGKVKKMMSKQQRGNINKGKIK RNQKEIVELKSTVTIKINLLGGFKNRL*Q TDK*ISYF/EDTTVEISQSGKQSSSRLEGR EQSLKNLWNTIKLTRVYTVGVSEKEKKE QIV*KISAGNFSNLKMNINIQEAQRT
6610	14661	A	7332	1	281	PR/PDRDSEAPGADGAGPRGALPVPGGH GQDPAEDGPGVHAGGARDGGDPARGA YPPMPSTRGCRKGSANLP/PVGFQYVH PFF*FPGVTAKIQRMDQVFTLAVRETE ALIPPEVPTRQCPAHEAVGKVHWLICH WFSICPSLFLISRAQYFYP
6611	14662	A	7333	33	427	GSPAPGLPKGWGFRGGPPGPGKFVFFKL PKGGFPGAEIFLGEFFQGRKKGLGPIFP VFLKTEEGGTLNSFFKGRVFLVFKPKA GSSSSSSSPNYKPIYLNNTDKFFNNMLA NRI*QCIKEVMQYDRTRG
6612	14663	A	7334	491	731	DRGLCLPTLEVQWAPILGSLQPPPPGFKQ FSCLSLPNSWDYRCMPTCPANFFVFFCIF **SRFHQVGQAGVQLTSSDL
6613	14664	A	7335	2	575	AGQVGQLGFPGWAGGEGRGRPPLL*LSL PGRQLPREEGLTSVSGHPCWP/DSFPGLP GVEKPQGNLAGGALLPKLQQRQSGPGNH KTLPISRGPADPGAVPVCHSTVGPGR*HS LALHTVPPEKFNIYFFTCPENSSFNSLPLP FRSSLEGIQAGVSSAWGHSAGPGTLGLS GDGRQRQARRFSLHSCLPCSP

6614	14665	A	7336	19	422	GEKTDKIQHPLMIKTLTNLIGIEKAYISUK VIHNRPMACIINGAKVKAFVRSERQRC SPSPLLNFNIGLKVPVRAIEKEKEMKGI*IG KKEIKLCLSGNDWMTLYLKHPKNSTKTIR TDTFSKVAGYKNTDAWV
6615	14666	A	7337	33	193	GNLGETLMDIGLGKEFMITKSKAQATKP KI/DWDLN*KSFCTDTNIMHMLIYL
6616	14667	A	7338	87	713	DIYYNCFGFASRKTDCLSTRIPCFTERTSS NS*TQNLTALE*IKYDCATVQACRSRNRK WEVRDALNKFSGTNSIFYIIRFYIYIYIF FFFFFFETESHVAQAGMQWRNLGSLPA PPPGFTFFFCPSLLKWLGPTRRPP/RQTL ANFFVLLVETGFTMLA\RMVLIS*PRDPP /ASASQSAEITGVSHCTRLKKIRFAKHV EFFFESHVE
6617	14668	A	7339	2	105	ENGWCWIATYGKRKLDLSYLSLHARVNS R/WDLDLGTETMEILEENLGEVLLDIGLG /KEFMTKTPKADSTEIKINR*DSYIWKNE NWIPISHYMQELTQEGLSRN
6618	14669	A	734	1017	1880	TLAKWWTRREQRSQSLTQASSYHQWQR VGACGQAARMRSAPAVIPTRPGEFVHQ LESASNSRLQPVSTSTGHRSALEAGLLTG CVLMPGCSASQASMEHLSWSPCPDGFCT YRVLRSCPLCNSRPDGPENHGOEPE AAVRSQPEGPEGGTRAGRPEPGGGPHLQ EPKASETHNPGIPSREGAAAQGHLLQSG THVRGGKQPSAAGPGRIARVLSGPPGPR ARGRGCADGS*ASPRARSSCRSGGRSRA AAPRRRRGGAGAARACARGCAGG*AGS AARGSSGR
6619	14670	A	7340	2	362	STHETFSKIDHMMSTSLSKIKETIVLSIPS SSSSSSSSSHSKSNLQNYTNTWK/LNLLQ NDF*VNNEIKMET*KFFEMNDNDTSYQS LWD TAKAVLR*NRKDHKLTT*HLKELQ KHEQTQS
6620	14671	A	7341	58	341	IKKFRWGPKPPLKEPPGV/SPDFPII/NFGN PGPVPGKDFKFPNFSSSPWGGRAPPVVP TTPGG*MGRFP*PPAFGVPRGGDGSPPPG APKEGELS
6621	14672	A	7342	2	428	FLRRVSLYCQAGVQWPTSVTEPPPPGFK *F/SCLTLPSSWDYRRAPRPAKFCIF/M* RLYFTILARMVIS*PCEPPASASQSAGNT GVSHRAGLVFLNKPVTGLGFDSSHYPYH SQISEKDPPPISSIFNKKSIHTNLLPN
6622	14673	A	7343	2	686	PGPPPEVRQHVRPGTRTGRAAIWPGSFP VGFPLHRAQGRGQSPFPQGTGKGLGLE WKGCCHAGAQETGSLPIMVHFSGSWE MVSRGKPSS*QLEA*GRGRAPGLGSKAG PRLHQDTPASQCMWVCLNTPSRQVRVG PDTQGYVCVPLPPQPHAPRMNQQLPPG APPPPPPSLVPKYFPPSQSSWDRKIPRLQ APPCPRH/GPPS/AVTNALPNPRLSAEA PWL
6623	14674	A	7344	1	603	SGCSRRCPGPWACWTPQKGFRGGRKRR SGLWGLCCWC\RP HSHRRAGCHHQDGE CDRWGLLPRDHSRLWIFLRNYWHQLGG E*KANAGGSDRVYQFWG/AGPPSAAPSG AAYLQHSTLNRGPSREDASFTPVGWT CTMSTRQSPVTPWTASAS*R*EATPVT AVTSM PAGAQSPPPTMSSASAAARTG CTWNGWFWAL

6624	14675	A	7346	19	1562	GRYWRVVDHGRESRVSGPRFRPSFLAA LPPGRHPWPWDAAGGSPAS*GGAA*S ALGLSQPRPPGASDAAPDSTPAGV*TASS SALIPSRAR*KSGTLEETKSRRPPSHRS GPVDLSRSSHSDSTPVHGPYFRSAPDP GAPPRPSAGQSQLGGSSGSPGNSIPCAF VQQ*LERARSHS/SPGSEHRRAS*SGGLR QGVQGIEVFGLGHPGGYSCGPQPOEKS PPPAHPLGVEIWCRLYIGWKSHPHPA LAEDWQPVPPAAMAVGAPGLRRIQRTS RRWGQCPNEAGHAADPRDSGPPGNYQP VSLHILHMDPGTC*PE*QHPRPPL*MAG KQWPCT*LDKGQSLGLAGSHQHQCQW W*QQLQSHTSLCRSPPPR*RASAPC*AS WGRSSAGAAAFRALGR*HLGTSPLGSAG SLPPCTAEPADASP*LSPTVLAELGSEG ASEECHSCPHGSPQSLSGSHRPAESQYH VER/WKQDMGPISVKSPTRRGPTSGSGL LRLARSSL
6625	14676	A	7347	473	792	MLARALDARFLRWCRRDQPLVYHSP*PP GASDAAPDSTPAGV*TASSAPAGEKDA NQMEWARR/VPRAPPPSPGSPSLIPSRAR *KSGTLEENKSRPPTQSPFGAG
6626	14677	A	7348	3	411	LCAAVNRALDEGIPLTSALYYATVTLDO VRNILRSDTDVSMPLVEERHRMLYDTG KILLEKFGGCFNLCVRESENSAQKLMHS WAESCPSYRDVTLVEGKRASFYKRTQIL VSYTCIVLEGK*DAQLQDILSITML
6627	14678	A	7349	2	331	AGGPGLPCVPHLPAGARAWRCQPPGA ACCPGRRLPLP/GKPSPGSSRRSRQSGQS CRTVSVLPSSPGC/RGSQVRPDLGPPKA EGCSPWGLRAESCGATGARVRCHRCVV
6628	14679	A	735	1000	1211	VPSTVLDALHILFCLISFLKNKLGWCSGL TPVIPGLWEAEAGGLLESQEFGTRLVNM AKPCLY*KYKCLA
6629	14680	A	7350	1	1062	EAGPGGQAARSQRGSSLGLVLPPLRLQR CGAPEGHASPTPAGPGAPNQLAAPWLL WPCA*PPGLCYPAPPPPPQKHP/GLLPA PRALPSPRELPGEEPSAHPVHQG/PSRA TRPASASFKSHSGEFRQGLISAHILQELP GPAGVNFQKVFNGAAGPAARHGPPSSRS SC/PCTHGTSGNREKPLSTKSKKNKSA WQATTQAGGPGLPCVPHPAKQVLAHGD ASKPPGAACCPGRRLPLP/GKPSPGSSRS RQRGQSCRTVSVLPSSPGLPGTKVRPW *GHLASLVWPGPPGKSPGQSTRPVGTLK RGVHPLPQVVGQSRFAILVLFGRQCQEG RAGMLGTCCLLAKPEVTV
6630	14681	A	7351	423	826	QKVCALT/CLRGITC*IFTHLCVLRGLCW LLGCEMCM*MKYVCMCEKCTFVG RC/M*VCVCAGDREHLAECVRGCVRHW CTRA*VRMCI/CVCTC/LCV/CV*VSGVCI CKSPCVLCKSIVN/CV*A*THTWFCVHVC V
6631	14682	A	7352	310	863	STHLSLPKCWGLQA*ATLAQPNRSRLK YKFIYMSKGHYSVKVEKQPTWGRKIF WQTMVSG*GGLESRIYKELLQLSNKKTN A*LKSGAKAQHRHFSRETHMGQQHQ QRCLIASLIREMQIMT/LRGYFTLIRMIIT RKSDNN*CWQECAEIGTLL/HYWWECE MVHGRGKIVWQFLKNIQLP
6632	14683	A	7353	3	357	SISNENFPTKESQGPETFTGEFYQTF/DLS PILLKLFQITD*AGTLPSSFYEISITIPKE* KSQENYSAMLYMNIDTKIFHKILATQI*P YINVIHYDQVGFIQGMQSSFNVIN
6633	14684	A	7354	2	207	GRVDHTHPGLPRPLCPHSPDP/PQRM*SH SAVGASGLADPYERIVVS*DGNSSPNH QGDGASQTSGEQI

6634	14685	A	7355	1	801	QPRDPSSGTHHPDGDGRGGQPAPICPRQG SCSHSPLEHAPCPILGPGSWPRWHL/DLL SLLGDPKVGGPIACPPGSPPHA WTGPVA CPGLGQPCSTPILIPHPICQHPKAPGGH PLCSKLLTCLPATPAVPSQPGHHPLFIM SGLMGAWPSPEAGPGVLPSTTAE*GTR HWTHEEEAALGATDAVTSPPGFGRQVP APRMPAWKPCIRGLLHSLPSEKPLQVH RECVPCEGLGPLAQTGAQQAQAWGPT DLSPQLPHRKHLK
6635	14686	A	7356	3	926	SSGTRHPDGDGRGGQPAPICPRQSGCSHSP LEHAPCPNLGPGSWPRWHL/DLLSLLGD PKVGGPIACPPGSPPHA WTG/PLWPVRAL ASPAAAPILIPHPICQHPKAPGGHPLCS KLLTCLPATPAVPSQPAIITPCSLCQASW EPGLLQKLAPAPPKLDHVGPRSQPGGPD VGVPVCTPKSRPSTCDTITPLPGLNEER ATGHMRKRLPWELLMPVTSPLWLWAA GPCT*DACLEMSLHSWPPSQPPPREKPLR SAQGVCAAL*RAGTTPLRLGPLRHKA WGPDLSPQLPPQKASKINTRGMESVK
6636	14687	B	7357	73	255	XGSEEQDTCNSNPGCSSPTGNPEWGLR DTALLEDLGKASGLLLERMVMDMPANNK CLIFRKN*
6637	14688	A	7358	1	710	PIETSQCGGIPRFAPITVGV RVSSLPHHS RGEGLQPPPSQSG*GSPAS/HHHSRGEGL QPPPSQSG*GS/QPPPSQSG*GSPASGPGF CWGQ/RP/PLPSCSYSPGALQSSRTPAQT QGPAHHLRGVSGPVHGGPPAPSPSCLLP/ SLRVLPPGLPAPPATSTVCPPLPVCTPP WVICQPPYPLAHQAGLG*LPLGDREGVP FHSNPNSLQVCPRLRKPRPWSSGLGPH AHNPMPSMGRSPPRATWILT
6638	14689	A	7359	3	750	GRGAEQGSHLARAAVPGSGPAWRPRP RGGLGLRPARSALRAGLPPGRVA AVGR GPALPGQG/HLQSSRTPA/PNPGPCSSPTG EGVPFHSNPNS/H/GKSVPGSSGKYPDLGP VGLCPHAHSPMPSMGRSPPR/GKRGL*P DAQMQEP/SKWGLSGHSPPGGPGKGQW PAPGEDGGHASQQQMPDLPEKLSPSFTP AHLHSLPEA/PVRHEPCLPR/HGPCGRQP HPVCARHRRARRAQAQNKACPAAGKK KKKPVPN
6639	14690	A	736	109	346	PRSLSPHRPAPPSVSVGFRPRGRGTQG DKGKCLGYRGPQQL*PHGTPGPTQGRR ARGCYLQPGAWGPLLSPPWECDV
6640	14691	A	7360	102	380	GKKIPMLYFAEIEQCILKFVVKRS*KAK*I LPKNNKAGGLKFPDFKTYKAAASKHQ VGGLWKELRSTLQAQQTWVPREELRST SPSYQTQVQ
6641	14692	A	7361	190	375	VIYRVSIISIKIPTTFFTEIEKTYNLG/WND NRP*IPKAILSL*NKVGDIPLPDYEYHLN MN
6642	14693	A	7362	102	345	GKKIPMLYFAEIEKCILKFVVKRS*KAK*I LPKNNRAGGLKFPDFKTYKAAASKHQ VGGLWKELRSTLQAQQTWVPREELR
6643	14694	A	7363	12	380	DPTVCCLQEHLTFKDTHRLKVKS WKKI LHANRNQKKAGIAKLISDKIDFKSKTVK RDII*MIRASIHPRRLINSYI/WAPNIGNT*I HKILKDLKGGINCNTIIVGDFNTIHR*SRQ KINKHWA
6644	14695	A	7364	3	298	RRSI/NSVAQAGVQWRDLSSLQAPPPGFT PFS*LSPSSRDYRCLPPCLANFLYF**RL GFTVLARMVLIS*PSDPPTSASESAGITGV SHCAWPISFS

6645	14696	A	7365	82	526	NHSELQLKLRA*MKMCTADLSLLEKDT *IKLEENR*QERIMLRAEVNEIENKIENIN KTGGSSEKYYKIDNPLTRSIRRK/*T*ITS FRNEKGSVTTNPTEIKRTVKEY/YYEKLY ANKFNNDDEMKKFLKHNLPKLTQKINR KSECS
6646	14697	A	7366	146	588	LPQVMAEFRNPNPGEVEGRKAKSMKGQT TGKNQDNPNVIDEIDFLEAFKNIQPSS/LFE ASLGLMGIKPVDWEEIGGEDVKPEVK AH/WSLRQKSGHCPV/GARLPTGLLATL GSGSGSGRATEAVSGPAG*KRASIGSS QRPRRFPTVP
6647	14698	A	7367	2	1041	CREAAMHALLHSEKDNPNVIDEIDFLEAF KNIQPSSFRSVIGLMDIKPVDWEEIGGLE DVKLKLKQSNESPLTFPWEFVRMGLTQP KGVLLYGPPGCAKTLVRALATSCHCSF VSVSGADLFSPVVGDESEKVLQIFRQAR ASTPAILFLDEIDSILGAS/RQPSKTGCDV QERVLSVLLNELYGVGLKTIERRGSKSS QQEFQEVFNRSVMIAATNRPDVLDAL LRPGRLDKIYIPPDHKAARLSYKRLYK KPCPIGPDVLENLAAETCFFSGADLRNL CTEAALLALQENWTRPQLTVKQEHVF*N HLRL*NRSVKVARTWLYMKTYLRKKDF LTVEGI
6648	14699	A	7368	1	2046	
6649	14700	A	7369	1	4340	MSAFESVPDDEEVDVDAVPENKLTDFNL AEGFRLFKTACDFLYHMDLSMNEDIEKE VKEEIDPDEEESPKKKHLDKKRKLKEMF DAEYDEGESTYFDDLKGEMQKQAQCLG GRSSVSMQAHRRPVVHGGDSCSDPAAM LTTVKAFFTGGVLQGGGLQSWQAPIF MDVGEWEQRNWRNLNCRKLLWGFAAER SREMKPLLVEEVESKGFEIRERTEGRAV GIKSRKSGWCLGCPRTENQPAQLQSDL NSDPRAL
6650	14701	A	737	134	387	PRSLSPHRPAPPPSVSLGFRTRGKRGNQG RQGEVSWGTGGPQQLWPHGTPGPTQGR RARGCYLQPGASGPFLRPPWECDV*ERG
6651	14702	A	7370	18	731	KEELYGDFENLQTDGVH*GKFGPDSLNE DVQUQEEIDPDEEESAKKKHLDKKRKL KEMFDAEYDEGESTYFDDLKGEMQKRS TGKQHTRFPAPRPHVQLNHAEFEDQD DEARVQYEGFRPGMYVCVEIENVPCFV *NFDPRYPILGGLGNSEGNVEHVQMRL KKHRWYKKVLKSQDPFISSVGRRFQTI PLYIEDHNGRQRLKYTPQHMHCGAA FWGKI*LQ*LAYCRD
6652	14703	A	7371	97	373	TYESEYFLLLFLFFRRQSLALLPRLECS VKIIAHS*NVKLLDSSDLPDSASRVAGIA GACHQAQLIFIFVEMGSCSSFLSVGL NQLF
6653	14704	A	7372	1	464	LVFFSWCLFVCLFVLKTESHSIAQAGVQ* RDLSSLQPPPPGFNRFSCLSLSSWDYRR A/PTMPN*FYCWPAGLKLTSGDPPASAS PSVGITGVSHCAQPRIVSFTSNIILKFNS LSKGCLIEAYFDKTVKATVLEYLALRNP KPEEHIWGLY
6654	14705	A	7373	181	652	QNRDVHPAASPNSAAQGS*RAKTHSVE GPLSVPGSPAA/PARSL*EQNP/KPHSL P**LSSQLGSPLEDVGNDTLLSRHKPQSP PSRGRPRPEGTRLHFTEPQRLRSSRQPTI TAHVVLPMPLPTPPAAHACPLPTHAR GTSSKQAEPPPSACS

6655	14706	A	7374	56	480	TRPTEHLKLSSAVSPGFCRWPPSAPKAEL SPA VPRSVAAGAATIAVVRSRWSPGEP CPLQTTASVRCAPMHRPVDGACSPPVV *ACRAAARLGPREGPPWDPQSPQSRAEQ KMLPVFGRASDAPFIDKKGFFCLISCCG
6656	14707	A	7375	265	2253	LSILSHCKRGVGCWLFTVALGWDHEQP CAPSTHGRAQPE/GPRVLPGRSRRP/GTQ TLAAPQPEPGECTSQARSGGPVSPHKAG SEAQES*EGSEDPQD*ELQQERTAKNILG KRLPQ*IILYCHSHLGEGPQT*NPGERRV *PPEFGLGCG*D/STLLAEESGWRGP/P WPAGASTPLEAQAPV*AGGCGPPAELPP QPGGAGHPGRVGGGSLGHQAGG*GQ** PHPSGPA*PSA*GPRSRRVPSGGRSQPAVS GPGWAWHCPASGPPGTSSFEPLWLWP LPGLPGQQRPPRLSAARGPQAHGPPRGP FSSPGDRHGPAGGPAVHPARHQR*PAVP AGVTQPGAVQLLLPPHRAGPLQGPGLGS LA WASCEGPPSLLLALPRASWLQTENW CQWLPPPSQVVSCLGNRQ*RPDFAQGIP LRGAPLGPRLPWRGLARAPAPGPWGAP SQCQLPWGRHPSGHLASCPGLP/GGSVS GPPSGGPAGSPPTGPS\GAPGSAG*GPGM AQGGPQEL*GQGPKAGEADSPSPWPCL QGPPGLWAPLPRALDAPPAWVYPPRPP ASAGGSPCAAPRSPPAASPAGPASGF/SA APACSLITLKQDGGGSPISGPASFLQLAW PPGFHPARLHGPSAREARAGSPGPGAGF SAGRGGFPPWSLSSAGCPVSPAA
6657	14708	A	7376	58	412	RPAGCGSTRGTCEWARPSAAPCQTAAG GACSPWTPAPRSPAGRSWASSWPG*C WAPPSGHGAQQPSPSSGQWWVMRWAP AS/WLPSGATPGPRFLALGTIGVPAGPRS PSPSFPTQRF
6658	14709	A	7377	1	1548	DKDNSGPTVLHLTARFGHPKVWNWLLH HGGGDPTAATDMGALPIHYAAAKGDFP SLRLLVRHYPEGVNAQTKNGATPLYLAC QEGHLEVTQYLVQECGADPHARAHDG MTPLHAAQMGHSPVIVWLVSCTDVSL SEQDKDGATATHFAASRGHKSVLWLL LHGGEISADLWGGTALYDAAENGELEC CQILVVNGAELEVRDRDGYAAADLSDF NGHSHCTHCLRTVENLSMEHCVLSRDPS VELEAKQPDSGMSSPNTTVSVQPLNFDL SSPTSTLSNYDSCSSSHSSIKGOHPRGLS /KH*SCRHTELHGHAEPRAAGPALGHDWE AHTPTTPTQLPPATPAPRHPTAPTPT*LPI SQASC GTTGS*HLHADQEQTTPRGDRGP QEGAE/PPATATTGYGGRTPAASPALSAS SPARGTTTGSWAAAPARRWSHARAWRT ARRRNSLGTTCLTAAAPRTPRRPGSSCRR RRRRRPCPRPRVRRRRSRLCPSRALALA AGSAAPPRPPAAPSLST
6659	14710	A	7378	2601	4758	
6660	14711	A	7379	1	741	
6661	14712	A	738	33	509	VSVSVGLRPPWELQVWVLCVPRGQAKT RLEPAGRAPEAPLPAVLSVLAGGSDSDSRF RQSLSSAAAPGADSLGARTELVEPGPS RPRPRPRPRPSWTTASTADASRAAGAR GRGNESAGSGAEVRSEQKVRESIGNR* KRKNKTHSKRKKTLQKKG
6662	14713	A	7380	3	5650	
6663	14714	A	7381	1	1131	
6664	14715	A	7382	421	582	LPGAQGMPPRGVQ*PSGLHIPQGGSTRTS GLKAMRSPPKNHQVPDSRAGPWAYC

6665	14716	A	7383	3795	5290	WNWTVHGDGSAGQGPWLHLFCHKRQH GGISWPLVQREGRDEHFRNQREIAPPAG REQTAVQKPQREMFCNSTGRLPQGPTTEE IQV*RV*RPHKIYAEEVERQFKEEKLAEQL KQAEELRQYKVLVHSQERELTQLREKLR EGRDASRSLNQHLQALLTPDKPKDSQGG DLQEQLAEGCRLAQQLFQKLSPENDEDE DEDVQVEEAKEVLESSAPREVQKAEESK VPEDSLEECITCSNSHSPCDNSNPHKNI NITFEEDKVNSTLVVDRESSHDECQDAV NILPVPGPTSSATNVSMVVSAGPLSSEKA EMNILEINEKLHPQLAEKKQQFRNLKEK CFVTQLACFLANQQNKYKYEECKDLIKS MLRNERQFKEEKLAEQLKQAEELRMGS GKYLNEHFVFTENDEDEDEDVQVEEAE KVLESSAPREVQKAEESKVPEDSLEECAI TCSNSHGPCDSNPHKNINITFEEDKVN ALVVDRESSHDECQDAVNILP
6666	14717	A	7384	125	605	EAEALENQSPCDTG/PQSAFSPPGSTQH PRSQLSQCKQRYQDLQEKLLSEATVFA QANELEK*RVILSEPLLKQDSKQVQVDL QDLGHETCGQSKNEAEQEETWPPAPYL VPRAPSCRPSQSRRGRRYPERSQRRPR GRPPPPCPRIKVKDGNKKTQG
6667	14718	A	7385	310	327	TVKLL*HVGNISLFPSPP*MLNTQWGK KSFNEWWWENWISTCRRIKLDPYLLPYI KTN*KSIKDLNCKTTK
6668	14719	A	7386	310	327	TVKLL*HVGNISLFPSPP*MLNTQWGK KSFNEWWWENWISTCRRIKLDPYLLPYI KTN*KSIKDLNCKTTK
6669	14720	A	7387	3	642	GKGLFDDEDEESDLFMEAPQDRQAGAS VKEESSSSKPGKKIPAGAVSVFLGDTDVF GAASVPSLKEPQKPEQPTPRKSPYGPPT GLFFFSAPHKPSKTRKVQSTADIFGDEE GDLFKEKAVASPEATVSQTDENKARAE KKVTLSSYKLNKPSSETKTQKGLFSDEE DSEDLFSSQSASNLKGASLLPGKLPTSVS WFDDEDEEDNLLGVQ
6670	14721	A	7388	1	3096	MVTHQQAARKPNMTSKKPKPMGPKA HGIFSGTRKNNLEIYMDQTRTGIKTKLS KNNKSGGMTLPDFKLYYKAIVAKIACG GSMYNSDTDEDEETEPSSSGQIENSIT MNKMKLLKAKMKNMNLSSKKHITQVSD EEEDDDGCDLFADSEKEEKDIEDIEENTR PKRSRPTSFADLAARIKGDVGRVDEE PTTVSYEDDRRGKNQDAYTEGGLSTIKT VNCSSSLAPSGEAKLRKTL/KEKKERTPS DDE
6671	14722	A	7389	1	238	
6672	14723	A	739	2	349	PASSIQQGGRRACLEVTWSCSIWNPTAT GGLDRGSVRHSREGGGEAPVRVQGPGE MIPAVPKSSWTLHKMQLPGHVCSTLGR RGDEKGEAGPEAHAYDPSTLGGRGQRIT *GQEFK

6673	14724	A	7390	1	1374	DDIFATEAIKPSQKTRKEKTLESNLFDD NIDIFADLTVKPKEKSKKVEAKSIFDDD MDDIFSTGIQAKTTKPKSRSAQAAPEPRF EHKVSNIFFDDPLNAFGGQLRSPSRCCQA DCCPPDSSLWVWGALVGLGGARAAQHI TQVSDEEEDDDGCDLFADSEKEEKDIEDI EENTRPKRSRPTSFADELAARIKGDVAVG RVDEEPTTVSYEDDRRGKNQDAYTEGG LSTIKTVNCSSSLPSGEAKLRKTL/KEKK ERRTPSDDEEDNLFAPPKLTDEDFSPFGS GGGLFSGGKGLFDDDEDEESDLFTEAPQD RQAGASVKEGKGLGSCSVSVCRVPKLSF SLGDGTLRRHGCAASVPSLKEPQKPEQP TPRKSPYGPPTGLFDDDDGDDNDFFS TPHSPSKTGVQSTADIFGDEEGDLFKE KAVASPEATVSQTDENKARAEKKVTL YSQNVKP
6674	14725	A	7391	1	417	MDSSRSVNGFTYQDKLSSSKLTSVLEA VAGEYALVINGHSL/ARHRY*LGQYLLS EHFCPGLLYLVLISPDFREDWSQRLGG AETPRCLLERLALSGFVLAHALEADM ELEFLETACACKAVICCRVTPLOKAQV
6675	14726	A	7392	3	700	LVKSYLAQFAARAIISELVSISELAQPLER GTHFPLFLLCLQQLAKLQDREWLTELFQ QSKVNMQKMLPGKRKLTCLFCFFNIISR DFRYLEWYVGGTV*LSCDNDKHYHRS HL*REIYNLTTFI*SRC*VFFICWVGSLLC YKDLKYLGDICEALLSGQDHLVK*TIR* CRWLCLFESDQNKDRMLEILEGKGLSFL FPTPQLEKDLFEQIKLDPSPTTYKWIKD NI
6676	14727	A	7393	83	3064	GRPRLLPPPSLPLFFVFRSPFSLPYPRRP DPEEAAAFAAAEFLEGISFLLSPPLTPS INIILLKILRCQAAKVESIAIEGGASRFS SSGGGSGRGAPQHYPKTAGNSEFLGKTP GQNAQKWIPARSTRRDDNSAANNANE KERHDAIFRKVRGILNKLTEKFDKLCLE LLNVGVESKLILKGVILLIVDKALEEPKY SSLYAQLCLRLAEDAPNFDGPAAGQPG QKQSTTFRRLLIPKLQDEFENRTR
6677	14728	A	7394	259	1157	EARWQDVGRQLTKTV*PWGRGWSRA SDPRLHAYFSYTAATGKAEPRTAPC KARERLGSLWD*SPPPPGWRPLRYPT PRRAGPAQFGKKRSASARSTWP*/VMQ RLAPKKTRKEQSANDHPIGGPEGRLFTS QLQLKFRALSERISWLEVSRAVTPTSAA VTSTPSTSKPRQKRPTNSQSRSAKPTPG RRCQPGGRCPTCTRSP*LR*ARGRRHGE ARRLPLREARRLPLREARRLPLRAPRSFR KVPSPGQGRSAPQAGVGAGTGRRRRSM DAWGRARSLAGSAGGVISLGG
6678	14729	A	7395	3	432	HIKRVKKNHMISVGTAKAFDKIQHSFIIF FKFRKK*EWGHFFNLKSFS*KVRANITL SGDAFSLILVIRQGCLLLPLFDKVLKVL DSAVKQKEKIRDI*VGKEEIKLSLFEDDM IVYIGNNK*/SYRKLPEFINEFSKVAG
6679	14730	A	7396	3	504	AASTGGGWVSEFESVAPGSPDTTAAPTC PQRTPRSLE/LPHFQS*TGCLNPISPERVS EPGQNRGKPRPHYPGPNQWPGPA/GGC WSKPGSTPALSDDQANTQVDRN/DLQV ASEGEGA*PAELFPKKMKRLGDLGPGF EGKNGLSTEDKNLIPQAWVPALCGYHV L
6680	14731	A	7397	376	419	VRKYSLCFYIL*NLFQNIKAEGILPNSFNE ARITLILKQTRHSEKPKYPYRISMDRHA EILNKISAN*IR*RMKRIHHGQVRFS*/G/ MWGWFNIRKQINV/IHHTHSLKKKNHMI ISINAEKEFDKIRKLPKLRNIYKQNI*LTS* VMVRNS

6681	14732	A	7398	205	1463	VYKKVEASRNEKGWVCGTHAGAFPDEG EGPEEAFLGAETAAGAP/GARDHPPFN HGYAGLLEGPDQVGSPPHSPGRRQA*VC G*RAPQSDCPGSGRSGMGEAGMPPR/Q GPGGLQPPQEGSVFVMSYGGQGAVER RIPVRPQ*GREGVGGQSLQPMKPDGEA ASIPTAGSRSGRCPAGRGRRALVGRSL RP*PPC*PSPR*SPPSS\GASSPGHPRPAL AHNG*SGWATRG**DTAPS*HLLVPKQ LAGTCLLCRCPKST**AKLEEIVPGSFHSP RGSYSRGLGAQHQLPSPASVAHPRCQPA PSAASHG*RRPRACLSLHGQLGMIW*S *APSGVQAQGHTHPPGPDISAERAPAGS* LSQLQGP*DSGGLGSGGCAVPPVAAGH PGSLAWQLPPPR*SPAPGSGSPAGRP
6682	14733	A	7399	2	680	
6683	14734	A	74	743	1233	ECGVFSFPFLRQCLVLSPQAGVRWPH LGLSLQPDSPGSSRPSHLTLLSSWDLTGT CPPCLANFRIFVETGF/TCFRLVLNS*G SSDPPTPQSVGDCRAGSHHTLAVFSFCF EMGPCSITRAGVR*HDHSSLQ*NPGLK RSPCLSLPSSGDYWSMPPCLA
6684	14735	A	740	15	239	
6685	14736	A	7400	658	1657	PGILSLRNALLTGVDCKVVVPVPPGHTH PQLRLFHFHPKTCSGWGEWGDHGVVW AGPAPAYHLHRDVQALWTNDHALAW P*AMTSERTLWPGHELSARPGSRWRISC PTGLAPQGGDDRTRGHWVTATCCSADGL RLCRYGD\GVRGGLPTVAWP*LTGSCSL RYGSGQQCCYTADGTQLLTADSSGGSTP DRGHDWGAPPFRTPPRVPSMSHWLYDV LSFYCCCLWAAPDPGKDRAGLGCTPT*P STLTLASAFGDPHFVTFDGTNFTFNDRG EYVGMG*NQGRLEPSGSRSAPTTAGTE TRGTGLTAVAVQEGNSDVVEVRLANRT GPER
6686	14737	A	7401	1	422	RPKPKNSF*LGGEKANKIPHPLMIKTLTK LGIEKTYVNIKVIPNRPMAIINGTKVK AFPVRFERQRCSPSPLFNIGLKVPARAIE KEKEMKI*IGKKEIKLCLSGNDMTLYL KQPKNSPKTIRTDTFSKVAGYKN
6687	14738	A	7402	247	660	NWSGRRLRMWPSAALSPAVSSPALATS PPKPLVKGRDGKPPAGRPPGREGPAW R*GPSPTTLGPAKAGSGQRGRCQP*GP GWRPAASQPLSGCPWCPGITELLESSE TAEQDRGPGSGEDS*TPDFYTPTRP
6688	14739	A	7403	229	1047	HSVQKAKADKTGVDGGSECGPILLSL QSHPRP*P*PLPQKPPEREEVWPKDGKLL ASRAGGLVCISLL*EPRVHSCTGGLPVK AELGLLRAQGLPHPASPARLGNTG/VGL ATE*TGISEHKLGPLGN*GVMGDAVR*G LCSEGLCPPSRPWGPMGVCGGLAAKAR PH*QG*VCAPGTHLEGSSVWSLPQLFP TPGPPAVCSALAPAPTPARTDGTIQNHL WPVTRKSALPVQEWGGDSWGTGQAQE EGPSVGYPGCP*LPGEGRIPPL
6689	14740	A	7404	595	626	CPMPLVPPDISLINEQTEKEAGDLVCPS/A GPVPDSFPLGSEPSSHGVSELKTRAKRQR ERHKKGGTEKDRKAERGT/PPGILLPFLF VH*SG*CQVAQGALDIISWLKIIVPKSVFP GCPLKSWAAAATPCSPCHPSSHCSVGV PGRASKFCACPLECP*SPPSPLSLQGPHL CPPPFHASPPDGNPGGQGVPLCPLRGSPG HLCAMSRCLRWNP

6690	14741	A	7405	1	603	EMESRSVT*AGVQ*QDLSSLQ/PLPLHPG FKQFSLPPVSPSKLGITRHTAYLNFFVFL VGDGDFAMLARLVSNSSSQ/CDPPSSAS QSVGITGVSHCACLTCSLCCQTMCFIVA SRYF*FWDGNLFCYNLQIGDVYFIFIYLF WMRPSYSITQARMQWCDLGLSLSPPPRF K*FSCLSLPSSWDYTHAPPCLANFFVFL AEM
6691	14742	A	7406	211	387	PNLG*LNPPPPGLKNFSCGLP/SKWE*K GQCLPPGPVNFGLTKLGVFPCGPGWLE IYN
6692	14743	A	7407	3	326	LSGVMLSPGFPGYYLFST*CIMDNKATH RYCVYISS*IFLQK/HIHDYLEVRRGSSE TSTGIGRLNGPQIPCFLLSTTHETSLYFHS DYSQNKQGFHIEYQGERSNKK
6693	14744	A	7408	1	553	SDPRTEESHKMLTD*RSSYLSLTALPF/P LPKSEAITNRASRAASLVRTPSKKDV GFLQKPRLRSCSPSSRCPPGSAARST*AA GTACGCCGTSPRQR*APGALGLRRPPQS *GRRSSPRPSLTHPSSSALPPPPTSPRTR YRG*SRAAPLLSLRLPSGKLFQPTCRPRV SLR*RPSQRVE
6694	14745	A	7409	3	377	KLSPSPKILASTLMGPIYHSHKVKF/IPGMK GQFNIQKSIIMTYHINITKNKNDMVISSS SSSSSSSSSSSSSSSSSSPIEGNYFPITKE/Y EKSIANIILDS*KLKAFS/LRSGKRQGYLL SLLLFN
6695	14746	A	741	2	311	FQLDTGSRAPML*CSGVIMAHSAKSLO TPGLMGSFNLSLPSRWDYRHIPPYLANF LIFFIEMGSCYITQGSHPFTLNLSSLA NKIQGNIGSDLVEDTG
6696	14747	A	7410	1	409	NKVFHNNKRSIHQENKTILNVHVPNNKD PK*LK/QLTKLTEDTDSIIIVKDFNNPLS/ TL/DRISTQNIS*DLENLKNMTNQLDQINI YRT/LMPSNTKIEHMMGHKISFIKQRIKI IQNTFSENGVTKSNRYLENPKL
6697	14748	A	7411	3	414	KGQDLYGEV*KVLLKVIKQVLNKKWD MSCSNN*HTNFISN*NCIKVFF*LDEI/CSF V**NKC*RIAKEVLSSSQ*CLGGHL/TSPH IRRSYNTTFSQSIWCCYRTKID*WTRTQ NPEKDLRI*GDLIYDLRCCSSRA
6698	14749	A	7412	3	333	LIKEGQIQKLSAKNGTPQDRHLFLFNSMI LYCVPKLRLMGQKFSVREKMDISGLQV QDIVKPNTAHTFIITGRKRSLAELQTRSSR ATIEKHKQNSETFKAFGGRLLARD
6699	14750	A	7413	3	391	EEDIVNPANDLIKEGQIQKRSKNGTPQD RHLFLFNSMILYCGPKLRLMGQKFSVRE NMDISRLQGQDIVKPNTVHTFIITGTKRS LELQTRTEEEKD\WIIIPATIGKHQNM GETFKAFGGPLNQGW

6700	14751	A	7414	3	1811	RYIDVLGRRYTAPGLG*LWRHPAQSAVP TAHCGDPVSLAAAGDGSPTDIGTSGELSG SLKIPNRDSGIDSPSSSVAGENFPCEEGL AGPSPTVLGAHAEMALDSQVPKVTPEE ADSDVGEEPDSSENTPQKADKDAGLAQH SGPQKLLHIAQGFAPAEETYVKRLHL/L DQ\VFCTR*RMRGIPPERSSWGHNSLNI FLPFQASHGQFLLPELKTRITEEWDITNP RLGDILQKLAPFLKMYGEYVKNFDRAY GLVSTWTQRSPLFKDVVHSIQKQEVCGN LTLQHMMLEPVQQRVPRYELLKDYLRKL PQDAPDRKDAERSLELISTAANHSNAAIR KVEKMHKLLEVYEQLGGEEDIVNPAHE LIKEGQIQKLSAKNGTPQDRHLFLFNSMI LYCVPKLRMLMGQKFSVREKMDISGLQV QDIVKPNTAHTFIITGRKRSLELQTRTEEE KKEWQIIQATIEKHKQNSSETFKAFGGAF SQDEDPSPDMPITSTSPVEPVVTEGSS GAAGLEPRKLSKTRRDKEKQSKSCGE TFNSITKRRHHCKLCGAVSPGRGGQGOE ATLSSALTEQLSPHQHTSHAHQPCTEG LPDPGSWI
6701	14752	A	7415	189	392	KQKWEKKQLKKSPGPGAAHTCNPSTL GG*GGRITRSGNRDYPGQHSETPSLT*N GKNLGRGMVGG
6702	14753	A	7416	2	325	SHAGCLIRFWRKSMTPTHSLPLTPTFLT CEASFLEPRASPVPPQCSMALRRYRLDM GQSFWGGLPSSHPPDPSRPGFV/PGVGHV PGQEGPGGKPAPDSS*H*DPTGG
6703	14754	A	7417	9	1430	NDNASFGEVYYHPYPPVGSQCHDES GFPPGPSCPGTWPTPALKPGREGSGGWL LGQASPVTAPCPACIF*VPCCTGEGQG WLGAPGKDASH/GA*KM*GVKGRLCVG APEGAG/PSQGI*SFFTEP**AHPQNGLYE DEHKNSRWGHPHPA*QWNWDRTS*CNI PSRP*VPHPWVRCAGLEPAGPGPHRTT PSQVGVLFLQKRIKQPACEPYALFTPLSP HSSVPASARPGSPD*MCRAPEDSCPEMA LLPGMGPPGSGERCSPRSPGAQVTGGV PGPFTWGSGESRCFRAPSPGASGEEAKC SRSPFTGGSGESRCGAPSPGAQVRAGV PRPITWGSGESRCRPPSPGAQVRTGV GPFTWGSGESRCGSLHLRPGSYPVFLA PERKGPPQRSQEKGHKRGGSQAAPKPSS R/PQESPSPLTPSGGPGS\GRNGA*GVSEG *SAPGSGGEEEDVFGC*GPPALGPEG
6704	14755	A	7418	1	389	HLTFCHHHYDDRVRGLYKQKECPGIPR VYRIRHIGEGRHLVYLQFKDHPGHIQPLE PQVKYVGNMHSNKAAGR*LMLQLSEFL CEEIRNKNQRIVQLIQDTRIHLPSMNPDC YQGG\VAKGPNKPWLC
6705	14756	A	7419	31	392	KHNRASPPPS*KKSSSPVTTKGRVYTKTP HTDVPQG*QPPYKQRRGGTSSSPFSFISY SIVLSSSRPPHPGPTSPRLHPSRSHLSEV PPLTQVPLQGPVPHPDPTSPWLYLSPSS YLY
6706	14757	C	742	398	574	
6707	14758	A	7420	2	704	TDSKCPFLVHQAHAAAM*KERHFLTANG SCIKFHQDINRLSSVFLP*ELVVRHCRG HQKRVDEIAKGNRLADQRAKSAVRRPQ GPKTLEAPLIWEGYIREIKPQYSP/DRDR MGHLSRYTFQPSGWLQSEDCKVRLPASS QWKILKILH*AFHLGKHKTSVHPKIVLRR KSTKNGQIGC*YS*NPLKNNPFNR*LLPH HNQRMGSYSGEDWQIDFTHMPKINGIQ LLEWVHTFI

6708	14759	A	7421	2	705	FSRDEVSPSWPGWSQTPD/LRDT/CLGL PKC*DYRCGPPHLAESKFYFPII*KLYHS MLCL*ADSKS*KPMSLFLFLFLFLTQN FALVAQAGVQWHGFGSLQPLPPGFKRFS CLSLSSWDYRCLPPRLA*/FFVFLVQMG FTMLVRLVSNS*AQ/CDPHALASQSVGT IGISHCSWPNVYIITTM*IFFSIPSPLLIR HLFFLFFFETESRSA*AGVQWHNLGS LQPPRL
6709	14760	A	7422	33	775	VMGPAPAGEQLRGATGEPEVMEPALEG TGKEGKKASSRKRTLAEPPAKGLLQPVK LSRAELYKEPTNEELNRLRETEILFHS\SL LRLQVEELLKEVRLSEKKKDRIDAFIRE VNQRVVRVPSVPETELTDQAWLPAGVR VPLPKCPMP*RACFRFLAPKPRITVCEA SYLSGQPSIRPDINVDVALTMPREILQDK DGLNQRYFRKRALYLAHLAHLAQDPL FGSVCFSYTNCHLKPSSLLRPQ
6710	14761	A	7423	74	576	LCWQPIRWWSPTLRANGHQK*/SGVAILI SDKTNFKATAVERDKEGHIYMLKGLVQ QENITILNIYAPNTGTLTFIKRLIDLRNEI DSNTIIVGDFSTPLTALDRPPRQKVNET MDLNYTLEQMDLIDYRTFHTTAEYTF YSTAHGTFISKIDHRIGHKISLNTFK
6711	14762	B	7424	158	346	XLSQGEVVPQIPVKSGGPHGAGVLGLHL EGPFISREKRGAPHAHLRSFEADAFQDL LATQGQX*
6712	14763	A	7425	1	1768	FFVTFVMYFTTIFKKQTKNLKSASPTP QNHP/GSSSLAQ/PLSHDPGPLSHNPGLA LWDQPSLPAPPRSSQGGALCGEWGQ\ PGPKAGPGLTSS/GDWGVPSEVGDDQHA SSGF*/P*GWGTFKH*QPASLGTGRCS NTSAENLTCLSLPGSPGKTAPLPGPAQA GAGQPLPKGCAAVKAEVGIPAPPPPGG QDPHPSPAFLG\SPGACGLRSTPCALPQA LPQARPCGRWFFPWLFPPQTGGAPDHP ISLDPGDISFNWALQQEGKRTSARA/RGA YLLCPRTAP/GKQGGREPPTPELKWRESQ DNHP*RGAAIPDV*PHCGCPQSQEGSRS PPASKLFQGESRPVFATWVCSRAKGTQK MAG*H*WGEQGTLPVRHTALQHAGASP QPASTGPGDV*RDRVIEKRKQNAHPW HSGLGSPGS\KNRGPSPPLPGGQSGAPG NCALAQEPGCGF/TRCTPQTQEQKANP*L STLPVTGPLPAGSSPPAHGGFTPWAPAT* LPAPPSH**HFPGVCRSPVP/PSCROALSP TGAQGP*TTAQPSHPRP*MPSPGGQPG WCHM*AQAKPGAKASPAGCTFSQPPPP GRR
6713	14764	A	7426	36	620	QHLKLLNIKNHTGEKS*KCKECDKAFK WLSHFIIKIVHTEENFYKCEQCGKTFNE CSHLIAQESIYT*KKMYKYKDHEKAINIY SHL/NHWRVHT**KEYKCNVCQKIFQ/INI NL*SEGIYFEDEHYKCEEGCSTFICITDFI VHILY*KKTLK\CCSNFVQHOGIYIEEKL KFNKF*KTFLQKVQLRRHQSSY
6714	14765	A	7427	3	276	PKKSTEKLLEVISNNSKFTROKANVQKSI TFLQYNSNEQVKFKM*NTLP/YKMKYL ISVTKHMQDPYEEKYKTLMKDNKEEQN K*RDIPCL
6715	14766	A	7428	125	456	LADWAHRAPASPQRNGADYAVYINTAQ EFDGSDSGARPDEAVSWGKIRVDAQPV K/VKRWLGGA*GLWDDECGSHGLPRFPP TQVYAAASLVFPLLEAETFAQKMDAFT HEK

6716	14767	A	7429	1	571	LSGKEVRENGIHRUIGNLLVPMENYCKF EDWLMPILDQMVM EQNKRGGFGLKKIW TPSKMIARLGKEINNPESVYYWAQKNHI PVFSPALTDGSLGDMIFFHSYKNPGLVL DIVEAERG/ADYAVYINTAQEFDGSDSIG ARPDEA/VPPWKGIRVDAQPVKVYANAS LVFPALLVAETFAQKMDAFMHEKNED
6717	14768	A	743	3	862	RNERHAYDKGTWKTRRAIMTVQ*SGET NVDRAYNLLYQTLDTWDSYVTC*ENKEI AAGQRNESHSDWTKYQVWEWLQHL DTNQLDANCIPFQEFDINGEHLCSMSLQE FTRAAGTAGQLLYSNLQHLKWNGGHTG ISKSKETRHLFPFFYLPGHTLATCRAV SKRLQPKLQCAVHSFVTPGIPYLDEIGYR ARDLREPGQGV AALLPLSSDGNPRRRPG LPKLKAQRRVRFP SNKGRGGPSPPFHS AFLNWQHKNVWMVKELSSYLGPLQY YPGSFGGAI
6718	14769	A	7430	1	311	RRVSSESRRWSLESRRSLEIQGRMERPR CQRFRENSCVAPRHCKGPGGKGLQALF* VPVAQLGEPGAQLGDPGAHGEATVPEV QGE/PAALLPGTAKVPGGEGSPGFIPPRHC RGTGEEGSPGFTQGRETSKAQRTGCLL SCRGCLCLSVSGDS
6719	14770	A	7431	250	503	DDEKKSKEEVWVWGSDEEDNGKDKKK KTNKIKEK/YIDWEELNKIKNIWRNSDDI TQEEYREFYKSFTSD*EDHLAVKHFSVE
6720	14771	A	7432	3	540	KRRGSFKMAELYQLPDESSAKALVSLK EGSLNNTWNEKYSSLQKTPVWKGRNTS SAVEMPFRNSKRSRLFSDEDDRQINTRSP KRNRQVAMVPQKFTATMSTPDKKASQK IGFRLRNLLKLS*RH*WGIL/AKWFYSNI DKPLFEGDNDFCVCLKESFPNLKTRKLT RVEWKGIRRLMG
6721	14772	A	7433	3	322	FFLRWTL/DTVTRGGIQWCNLGSPQPP/P PRFKRFSCLSLSSSWDYRRPPPCPANFLY F**RRGFTMLARLVLPN*PRDPPASASQS AGITGVGHRAWPMPIFENRFDL
6722	14773	A	7434	22	475	PRMISCRPTRPPTRP*SHSAPFRHFLLVHP VKAKYFLSAVMTTHHLASASHFPFAA* SATFPAAPQPMWTSDDLQPPSTCLPLGTS PLPSRPLLPVSSCS/SFPDPTQMPPLSTFP GLPFL*PHSSALSLPLL*LPHGFALSPSSV PFPT
6723	14774	A	7435	14	362	LFYQTFSNVN*KT/RHKMNK*TEDFNNTI EQLDLTVTFISLHSTVEYAILLITHATIFI DHLLS*KTHLSK/CSADGITQIPNYDTIK QEVKNTNMSKNK*KLNNKFSNTLLFKR L
6724	14775	A	7436	1	440	SPFPPKNFYFSRLPLIFLRGVGPKLPPPKK RVFSKNPPEVFKSPPLKKKNFSFPPPVNL GPPKDLLKG/PPSSSSSSSSSSSSSSSSSS SSSSSSSSSSSSSSSSSSSSSSSSSSSSSS SSSSSSSPDRERPPTI*N*PTRP
6725	14776	A	7437	8	487	DEVSLVAQAGVQWHNLGSLQPLLPFGK RSSYLSLLSSWDYRCPPPCLANFIFSRD GGFTMLARLVLS*PQ/CDLPASASQSV VITGVSHCARVRAPSF*MSASGVITCVGW ELFGMSPVAEANDHLSGALVPFSALFS HFMPGLLPTMFCPLRGCE
6726	14777	A	7438	1	445	IDCWHKCQDNMGMKDNLFN*SYWDYWI SI*KKRTSNLISPIHKIES/RWINLVNSK ALFRRKQKRTLHDCGLGNSFVEETQKAL TN/WDIKIQ/SFCSSKYTTKKLKR*ATD WGKIPTLFAKNNNDKICEHTHNKRRYM FGQMHVWWA

6727	14778	A	7439	131	763	PGISADSRGQQKLS*WGPSHQPPPGPLKG SAPGG/LCGLVGPAAKHALRPSFHSGA PSAGNLGCFAAWASSLNSNQGSPPSSKG HIPKDRGEPRGTVP SLRKATATGRKAER LSDEGRSSVHG*AGIPGHEGNAKENRDR HPWQLPGIASAAVVIASGRGALPPGGQA GPQKLAPPFSSLSVPGGARWG*AEGAPS KQRGKVTGEPGRQC
6728	14779	A	744	15	404	RNFRVDDLVS PRCCGILWFFTQGGQASCW RPLATLPSRQKPGSSPGKAGCWPA/WDL GLVPHGVSGVIAASSTPQQQAVCSPSV AAPSTLLLRTHLLGAASLQGCCGHQILL HHLIGMDLYVAASPSHRFW
6729	14780	A	7440	47	265	
6730	14781	A	7441	1	330	HHHLAPFSSLPFNIVL/EEVLARPINKEAK *KAP*LERKEVKLP/LFAEEIQEMIWIYDN SKESTKEELLEINKFIKATRYRFHIQ*LVF LYTCNNLK*KLIKYSINLTKV
6731	14782	A	7442	3	423	NNALLNNPWVKGAIPKEVRPYLD/TREN KVTA*QNLWDALKK*/CSGKLIALKE*C QINNLSFPLKIEK*EQIKSPVNIKNVIFK KLKIKKGLKV*KK*RKISETKSWFLEKVI KIY*SQGRHARKKNEKSGITRDSRTRG
6732	14783	A	7443	1	689	YIYIYSYINIQFVFL*EHLINKFLSFVYQ LMLKH*KKRTTNTLFTLIRTM*AFLFY QIICISYVIAAVLFCI*IFFP*HLCLLVLF MYFFNLRFIPLLRSDITSFHYMPLFGRFL SC*SKQEH/HNCQPGIYFINLLVWKHFFL DVIFTLVYFVG/FALILYDFLIMSVC*TF YLSLFISR/ACLLFYPHI*LIFIWAYISRLEII SFHTF*GIYTFASEIVFIIF
6733	14784	A	7444	3	545	TMLLFTLQNRCTWSSHCMPAPALCPGK LTVGTGSMGPR/SPWPPSSANA*PVDKP SGQEG*GQCTAAAPPCRVAVSLSKVRAP GDGLSCGSSCPPG/RQGRGVPCPAAGER REGREDLKPRE*IGSCIKNKLGISPAK*D* KNSQDKSKKNPIGD/RTSLAVGTVPQSTR PRVPLGYHYCY
6734	14785	A	7445	243	768	NLPNK*QDEGRGGGAEP PPPWPG/SLPPR DVEAPSPRLGAPAWPPAGRGWPPREG AWLG*VLCFRKRSPLPVLGVAGA*ASVG GGCVGRCPLSGAWPPPGVGDKPSYCSE RPAASFP/PRTCVFPNAEGGGERAPRDSR GEGSLPCCRGEERGQGGGLKTTRINRFVY QEQRDFTS
6735	14786	A	7446	596	1335	LEQITFSVATAMDSRFPDFQDLLEPERA CHDAAGTLEVDFFLFLNFGTVDLAGRKE TTTEQALPPALLGIRRPEFLSRPSVQTED APSKVNYVLCLLIAECSPGSDYLP CAIP SAYR/RWYLD FCPR*FLPPYY*RRHPFQW TTVTQEA FSHHDVAFTSTPVLFPYPSAQ PFIVKSESSSQIAKAALSQQRPSLIYERAL HFFS*SLQRHTIDLQGI*ILMLSEERQH LFESSIGPHPTISKD
6736	14787	A	7447	199	450	ERSFSKKMP*NPPGGGEPP*PTLGIPSSPP PHLLGPKFLEKIFGLPGLPGGKIFP/P/GFA FGPNLGS GGEIPGGINPRSLPLGER
6737	14788	A	7448	154	695	GLLSNLLISIFFIPPKKSAPKYQH KMHSQS FHFYCFNTHFNQFNKF/FNELQ/K*HEL KLE*SKIILYNQNKPSVTYREIMQLRAQL KKIIDS VKHKRTWQGLKQGV/YWGFYV NVIGKSFFYFWDKYFIFIDWAKNTRLIN MGPERPTVFLPNFIYSQSTKLALNWVINI MGQFIPSYSVSA
6738	14789	A	7449	203	443	FFVKGPKNTHW/RKDSIVNKWC*KN*IST CRRMRDLTCLSLYTKIK*KLRPIESGTE PR
6739	14790	A	745	1001	1459	

6740	14791	A	7450	8	312	QTLALSPGLGVQWRDLGSPQALPPGFMP FLLP*ASQISRDYRRPAN/LMPGPNFFIFQ AETGFSTVLAPGWCADLPDLVIHSASASP SAGITGVSHRCPARTF
6741	14792	A	7451	1	2554	MKVWLLLGLLLVHEALEDVTGQHLPKN KRPKEPGENRIKPTNKKVKPKIPKMKDR DSANSAPKTQSIMMQVLDKGRFQKPAA TSLLAGQTVELRCKGSRIGWSYPAYLD TFKDSRLSLYNSRGLLREGQAGPMGSQP KVNPTMARVPQVEPPVGETWESSTLLA DGAVDKRSSFALCSSFISTWKLATLNDP VHLLSLVCTWTLRTAGRSRTARHVA ASRCGHLTFAWQNQYISLERLSVYMCRF VTWVNCMSRFGVDYFIIQVLKLIQVLP PDSVHPRSHKHLLSLRSEIAKTTSYCPKH SSLSIPLPRNQMRSGVSVTLEQRSESTSSP FPVTALLFVNLT SWLGKGPILPKYVAVS VQLSRAGACFSDVTHREVLMSFCYMOVV GGDFLLGGS LVCQVWFVFWVSRGYTLI FSESREYLKEEEEFLCKGPGYAGQVRK KNDDPSSVKQNERYGQLTLVNSTADT GEFSCWVQLCSGYICRKDEAKTGSTYIFF TESGGRISVLNVLTAQELLAHEPFDD VSRNSAPNLKHHLTVTQRRQVGKKAKK NYLFQEHCGENTRKHVIRIGVSLALKISL CKYCNIPSQNDPEKQRIQCTMPKKKSHQ HQKYPQKPSPEFLACPKDRIEKGELFVP SPSYFDVVYLNPDRAVVP/PGDRAVG QSHAPQGIPSQGDPSQWNGHCL*HEAGL CVSATSFRAPGCGLLQGGGRGQISDLRQ VPAALRGGPNNSSKPAFCSSCHMQAPW* V/LAALSRRPQFPPLPSPLLGHQVGTG IPSGPPSTILASSNKVKS GDDISVLCTVL GEPDVEVEFTWIFPGQKPPSRVTGLWAG TWWCLYRVL
6742	14793	B	7452	1	2586	MKVWLLLGLLLVHEALEDVTGQHLPKN KRPKEPGENRIKPTNKKVKPKIPKMKDR DSANSAPKTQSIMMQVLDKGWFOKPAA TSLLAGQTVELRCKGSRIGWSYPAYLD TFKDSRLSLYNSRGLLREGQAGPMGSQP KVNPTMARVPQVEPPVGETWESSTLLA DGAVDKRSSFALCSSFISTWKLATLNDP VHLLSLVCTWTLRTAGRSRTARHVA ASRCGHLTFAWQNQYISLERLSVYMCRF VTWVNCMSRFGVDYFIIQVLKLIQVLP PDSVHPRSHKHLLSLRSEIAKTTSYCPKH SSLSIPLPRNQMRSGVSVTLEQRSESTSSP FPVTALLFVNLT SWLGKESREYLKEEEE LFLCKGPGYAGQVRVKNDDPSSVKQNE RYGQLTLVNSTADTGEFSCWVQLCSG YICRKDEAKTGSTYIFFTESGGRISVLN LVLTAQELLAHEPFDDVSRNFAPNLKHH LTVTQRRQVGKKAKKNYLFQEHCGENT RKHVIRIGVSLALKISLCKYCNIPSQNDPE KQRIQCTMPKKKSHQHQQKYPQKPSPEF LACPKDRIEKGELFVPSPSYFDVVYLNPD RQAVVPCRVTVLSAKVTLHREFPAKEIP ANGTDIVYDMKRGFVYLQPHSEHQGVV YCRAEAGGRSQISVKYQLLYVAGWMFS FLVMTLTENPSSPFQPNPSIVHSGAASVL DQQSQQFQACFLLFLSHAGSMVSAAAL SRRPQFPPLPSPLPSLLGHQVRGIPSGPP STILASSNKVKS GDDISVLCTVLGEPDV EVEFTWIFPGQKDERPVTIQDTWRLIHRG LGHTTRISQSVITVEDFETIDAGYYICTAQ NLQGQTTVATTVEFS*
6743	14794	B	7453	520	600	MIDCVFGAELAESLSFILGILGFTFL*

6744	14795	A	7454	78	624	TNKSQGSQGLCVAGPRACQSSSPVQQKR NVPPLSILSAPFSGS*GL*PCGGVLGATG GAELMGLLRSWCPGVCTVSLGQQVGS LSLESEPPASSLNNRGLLREGQAASVGG QPKVTSPTMARVL*VEPPVCETWAGPHPS WQMGPLPRG/VWAGPPQTPPCGVTQLA ANGKQPVRKPGSYP
6745	14796	A	7455	3	369	ISQPPKNLGPPEKETYKRPPSSSSSKKEFPF FFPGESKGGVLSPRKGSSSRVKPFSAPTP PKKGGPRSSSSRGKSSSRNFKKKGGFP G*PRRFFFPGPKPPRPKKAG/H/YRGK PPGPGPK
6746	14797	A	7456	2	648	QTLPFKGRLPQEDGLGIRRPSPALPWL CQGPAACPLPASLQVVPGHQMDPIQLVP PFLSPARLLEL*EGRQKGRWGRPSQAG GQEKQLSSSSASPTAERARPPRAGTYG* CLALP*VTGGVGPMASLTPVTTGMGQD SRGNR*EGPGVR*/DWGCSFRER*EGGTG VALEERGLLQRQREKTSVGVSSEPGFVF QRPALPGPWVCPRLHKRLA
6747	14798	C	7457	89	376	
6748	14799	A	7458	3	864	MNFSPLFPSNFGDFSQNIPTSEQQQPLA QNSSGKTEYMAFPKPFESSSSIGAEPKRN KKLPREEVESSRTPWLYEQEGEVEKPFIF TGFSVSVEKSTSSNRKNQLDTNGRRRQF DEESLESFSSMPDPVDPPTTVTKTRKA SAQASLASKDKTPKSKSKRNSYSSWK SRVKNIRYESASMSTCEPCKSRNRHSA QTEEPVQAKVFSRKNHEQLEKIICNRST EISSETGSDFSMFALRDTIYSEVATLISQ NESRPHFLIELFHQLQLLNTDYLQRAL
6749	14800	A	7459	2	743	KASAQASLASKDKTPKSKSKRNSTQLK SRVKNIRYESASMSTCEPCKSRNRHSA QTEEPVQAKVFSRKNHEQLEKIICNRST EISSAHARRILQQSNRNACNEAPETGSDF SMFEALRDTIYSEVATLISQNESRPHFLM ELVHELQLLNTDYLQRALYALQDIVS RHISESHEKGENVKS VNSGTWIASNSELT PSESLATDDVFIQEK*KYASQKHLHINV HSIFSHDSLKLKHQING
6750	14801	A	746	3	357	
6751	14802	A	7460	1	336	IYFPTPEKFGPPKETLKKGAPSSSSSKQKF PFFGPGGKQKGGFGLQTLPPS/RSSPFP QPPQEKGFQGRSSSG*ICIFKKKGFP WAGGVQNPKNPKGFGPPGLKPWG
6752	14803	A	7461	1	3010	YRIPGGGTWQSARPRVGSRRVDGEA RRGLCSPSSRRWRPQPQPHCPGRAPA LSCAAAAPARRPRGHAESRRDGLGSAE EEESWYDQDLEQDLHLAAELGKTLLE RNKELEGLSQMYSTNEEQVQEIEYLT QLDTRLHVNEQHAKVYEQLDLTARDLE LTNHRLVLESKAAQKIHGLTETIERLQA QVEELQAQVEQLRGLEQLRVLEKRERR RTIHTFCLKELCTSPRCKDAFRLHSSSLE LPA
6753	14804	A	7462	2	190	SSNKKKPPKNHPEPDSFKTEFYQTF/INT P*IPILKLFQKTELQEILPNSFCEVSITNSS TRR
6754	14805	A	7464	359	1095	PKGGENGLWCGASLLNARMRAGNKSPP LPRLPPGATKSLPQALQFQPLLAEPDSA AGLGTGGTPRLTEVGGAL/S**RSGSGFP ENQKGPPDPASGYLDLMHTPPFSQDPIS PASHMPIPSWSTLFSVEDRRSRQKTTGR WGSRCGLPHTCSILVGGVTREGVEMLP MGTCGKCAPFAPHLAASSNSVLTAGDP APGAGRLGSAAQEAALGQGGGRRSQAP PRRALQRPHAWVETTSQWRSAG

6755	14806	A	7465	16	405	VGAIQRAPAPPSCARCLHTPDIRATLTQ TPGGLTPQEKDHEHGHGDRAGHS VWVLDPGTCSRRLR\WFSPLYLELLRSS GECRG*SPASPSLSHHTAHVTPKAFIEHL LCARCKEDSGITGQGAF
6756	14807	A	7466	16	255	ARPSCPCSWSFSCCGVSPGA/LVTEAAIF YETQPSLWAESESLKPLAKLMTYFKNS TYLIRLFMIYRCKPVKSKKKKRN
6757	14808	B	7467	1	1026	MRARRLPWALTVAELGWDQTGGDQT SPGGNDRMSMEAECSTTVSPLSCSIPTG CGQTREEVSARATPPPSLGASLLQTLTPD THCTGVSATIMSM LVVFLLPWFSHSST LAKHKRIHTGEKPYKCEECGKAFSRSST LAKHKRIHTGEKPYKCEECGKAQRSST LTKHKIHTEEKPYKCECDKAFKRLSTL AKHKIHTAGEKLYKCEECGKA FN RSSNL TIHKFIHTGEKPYKCEECGKA FN WSSSLT KHKRIHTREKPFKCEECGKA FN WSSSLT HKRIHTGEKPYKCEECGKA FN WSSSLT HKTIHTGEKPYKCEECGKLLSTPQPLNI K*
6758	14809	A	7468	1255	2710	ARPSCPCSWSFSCCGVSPGA/LVTEAAIF YETQPSLWAESESLKPLANVLTTCQAR LETPDFQLKNGVAQEPVHLDSPA IKHQ FLLTGDTQG PLPLGLVHRMDPAEQAP WS*QGPKALFNSTPTESLPAPWLSMAP VSWITPGPETTSRCRGVLRGVTFLLRRE GDHEFLEVPEAQEDVEATFPVHQPGNYS CSYRTDGEALSEPSATVTIEELAAPPPP VLASTMESPPRSCTLGKVTLTVCVAPLSG SGISSLRGGERAAGNPGGSTSPDRIFFH LNAVALGDGGHYTCRYRLHDNQNQWS GDSAPVELILSDETLPAPEFSPEPESGRAL RLRCLAPLEGARFALVREDRGRRVHRF QSPAGTEALFELHNISVADSANYSCVYV DLKPPFGGSAPSERLELHVDGELAGHQR GRARVQCPSGPPVFPLFPWASDGGALGL GSAPIAYPGGEQAIGGRGSGDAWNFGFLF PTDASP
6759	14810	A	7469	3	1312	GEAGRGSTGLGAGQGCATSQGLAARS SWGHRVGHQLGSRGPTRSSAQ*GAAA ADLQAGRHS DHNPPPT*AA*G*NLP AE E*GGPRAGAPAHASCPTDPSAGEPGTGA GAARRWHQPGLCSPSGV*PQASPGSSPR AQTQSPGAAQEHHEPRE*AAQAGERPA GGSEVGAGASGGPAAGTG DACGNPGPA AAGSPRGQGSRAATGHTGCGAVQLPR PAPSGRG*KCPAAAAAQETEG*VRPTAA TLRLAGSGARRWCRPSASHHGPPDIPGG DSGGHPGSAPQP*AAAGPGCPQLQEAG GSEPQA*RATGCLQGPGRCILGPDPEAP GLLPQHPRAGTGAGTAAGPGHDG*RA TF*ATGVRGPAP/EAGTSTKS*G*GSWQV QGTGPKWGLCLQPSPSIQGPAATRPSPK\ GRAEQSSASTEPSHPAPRKT
6760	14811	A	747	461	791	ESLQTGLTFTKSDEM DLLPHIGPCR*DG AVSGAPSSNSFPTSVAGSTR LAKERGDH HLRKQPRWEVHGAVRRRAVHRPFIFHLR KEAACCLFPPTLLPSRQQTLP LSK

6761	14812	A	7470	1	1987	MWEPCGSQGD/TVFGCRDR*GG*GAA GCAGRPSGDRGQWPHACGGGGRGHPS TSTGAPAGHGEEAASEQRLLSGGRLRPP GPH*AHRHVGPAGRGLC*LGRREPQHR VPSRSAPAAPGRLPALPFLDEDKG*AEPR EAAPRRPRAAGHSPGHVSHCGEAPGGL DHLHLPQ/SPAGMGSEHDGRSGQC*PSR HTSPVTRLQSPPDTHPGGSSLPAPRPAL SCWARVFASLGDQPAFLGGHTGPPDAS GEPQHKH*PS/GPLSSSSFFGAPIQGRQRT ESLPGTC*GMEWPTAALG*RGPRPVAT PGTPGGAFTS\GFP\GCQAQKPEAGLVVA NGTMCCPAKHTWRSGPKIPTLISILPLL LHGGAVSLGSPQGSALRPAPASLGPCV TDKSIPSLAQNTKYSPLP*ET**HLPECS RGWGSPLLVLHPLLGHILVSAHIPLPGYK ACPRPLNLLGRFGA\QGPGRGSLSRSSRG */PGPAPSALGVSGSPSSHPPN/GLYAEAH RMGFLPDSKSKNGLISKCKLTFHPQTSK PPAPISP*SKTSGGRKNRLPGLHSQQSFG RMPPGMP*APSVYLLPLLHPLPLRTAG KPSSLQPRPSLVSSHTRAQQLSLV*G QPCVPGHTSTRQGLPPLHSILPAELPQSSF ANRGIKASLRIRK
6762	14813	A	7471	2	353	DRKEERLRSRSGAAATRSSGGKGVAE WDPLCLDPELWDQFDNLKNHSLEKFII SAKERTIEISYTKQLRNLLKTCQPKRN WKEKEYIT*NSPSLPVNKMSDHARQH*V ITLGSIKLSSLRS
6763	14814	A	7472	2	390	PLDPQVRKIEDKVNKSRS*KN/LGLEDL GTYSVIVTDADEDISASHTLTEEELEKLK KLSHEIKNPVIKLISGWNIDILERGEVRL WLEVQKLSPAAELHLIFNNKEIFSSPNRK INFDRKGLVEVIII
6764	14815	A	7473	3	223	DAWVTSTNADKEFEKIQHPLMIKLSSK* VYNMSYIYPLFKIIGIYDKSLVNILNVE KLKAFFLRTGTRE
6765	14816	A	7474	3	1033	CPLPFSL*YSTCGEKQPQMSWRASAASP GQSAPSSSAVGCWKASCKQYVWGTPSY SYTNRFPRTPHSPGVWKACISRAG*PA RKNSLICLAGKTGALKDTSKAPVFPL CHRHSDPGGGFHCAELGTGNSPLGRRL KGLP*PAAVPCPPGAPHLPQRRPAGRPT *FPPAQSSPPQSVWSRSRCTRMPGPTGPG RWGPAAGSWPATSLASGCPSWEVCGAT NP*APRLSTALGCCPSPEGKRPNTPA TRPPCVPAG*APPPGHSRGNGGLEKKSSF PASCGR*QSGAGPSRLDFPSSPSRLHSVP PGPFRFTSHPQVQASSVSEKGEKPLRSYD PRR
6766	14817	A	7475	63	389	KNQEQESEETLPNLFYKASITLIPKLDTS SSSSSFSSSSSSSP*KPITHRNIPSSSSSS SSHQIQYIGKIIHHDQVGCIEHLIKFNI AA**EPSKNGDRRNT
6767	14818	A	7476	3	335	HASGKDRHTDQRNRIKNPETDT*IYSTF* QKC/RLI*WRKDSLWNKWC*SNWASPM KKIKLDLSSSSSSSSSSSSSV*NVKLL GNNVGGNLQYRGLRVHTVDVKAQHI
6768	14819	A	7477	50	378	LEAWAGLSQVQTPSKFLENPSQSYRLTV PLRKHVRPKQHEIRLA*VGNLSDFT G*/HPGCIRGLRPGHLSRLMDLGLGLMV KSMERDQRLVERAQRDQELLQALEK
6769	14820	A	7478	62	389	KRDPRKTFITPPVSGERQIRRGPTCKWG FLGLVGRGGPPEGEKSNLLWNPGPPLG PNIKKGPRLTTPSSSSSNFQREKFHPGGG APP*NPT/ILGRPGGPNKLGWGP

6770	14821	A	7479	18	373	RGEPPSPAPIGIFKSPKRGFPGPKTFFPGGF LPKGKKKPGPIFPFGFLETKEGGTTPNPF KK/ARVFLVFKPKAGSSSSSSPNYKPIYL NNTDTKFFNNMLANRI*QCIKEVMQYDR TRG
6771	14822	A	748	40	317	LRVTAQWASHTLPDPVVGNPGSGWKEK DRDSEWGWRDLKSKTWVEVEAEGGLS GDTFQWLPQGSSQRPGLPLVNQAGVQ ETKGAGPL*SPAPLPPGSPEGAQASGCS VGAIGMYPLTGPLPPPQPRSWISGPSTPI LSLCPSPSTRSQGFPPQGLEVCVTPIELL EVRLKIRECFPSFL
6772	14823	A	7480	2	1288	FFFFFCYAVNAAGNEGNDTALSFPERS QSRLCGFSQNTLCLLPAPTRSNFPGSCR RQPPGSLPALALAAAGDSPGEAGPPGEGS RGIQHTFP*IPRPRRVQGSQSSPSPTSHQ QFINGEGQTS**QNLGLRTQEFECNRLIS RL*VVRFRSLFAFFPLFAFHSPSPFF*GN V*ARLQGQKMESLGAEGLHRRRPRQGW RKTQKAPSAYVGKNGNPAP/PWFPPKV FRTGAAP*GFPNPISPKP*RHSLDLAKG RGPDPARTGTLSCLAFWPSRELITPG CHVLIGLSRLRGALFGG*GTAKRLSHK GRQSGP*N*PGRHTAPLIPSAASGRVRV GLQRNEPLAPQNPTLRLSSPLLPGGIKVE TVGI**GVGMR/DLGS*NEVSAFIGN*ESR GSGSSNRMVFLPLPNARESPPSRFETVN
6773	14824	A	7481	3	352	QFSIE*KKRKIFPTQA*DKQRLNVQYKI LLVTRKEGPNKGKRGKPCS*IRKLNIVKTS IFPKLIDSYNKFPNY/LSASLLELTSCILK LIWE/QNPFFMKMQRARTVKTLSKKKNK VEK
6774	14825	A	7482	2	253	SMKKVERSKISLSFHIRKLEN/QLNPK*/R RRREIKIGAEINEIENRK*IEKINETKSYF WKISKPLAKLIKEKTQITNTRRAY
6775	14826	A	7483	2	1114	WSHRDWICPASGFQMLNVGSGVQILRK KLMTYAL*LLQLTVWRDSRLLCREGAP K*SL/SSLPESRRQSSEFEKAKTCQLFINA AVDSPAYHISLAQSALQICLTHPELQN EICCQLIKQTRRRQPQNPGPLQGWQLL ALCVGLFLPHHPFLWLLRLHLKRNADSR TEFGKYAIYCQRCVERTQQNGDREARPS RMEILSTLLRNPYHHSLPFSIPVHFMNGI YQVVGFDASTTVEEFLNTLNQDTGMRK PAQSGFALFTDDPSGRDLEHCLQGNIKV KPSPFQEPSPNTSKEATLYKSKLCKKFN SGVFQNFNQSNLHDKKKKMQDFVKPIEF LIHNLTYTTFHIKERKGVSNNDTSLIRI RVDM
6776	14827	A	7484	4	252	GDVEY*SIYSLAPIRHWRNGPRASTLW LFFFFFFF/ETQSCSVTRLDCNGMISAH CHLRLPGSSDCPAS
6777	14828	A	7485	95	670	FLEGGWAHFFPPPKGSFPKIPKEGFKTP PKRKKIFPSHPPLNLGPPDLLKGPP/HSS SSSSPEVINIYCSPFREGHRR*SKVSSW STEVNKPV*DKFPHTPSY/ATPCPLPGY RTAVFSYSPPK/HMQSLPTQKACSFYS FSHSDQSPTLVAPFFFCMLRSSDKLM NDVPAPVFLPSFKGNHACSSR
6778	14829	A	7486	2	338	ENGWCWIATYGRTKTGFLSLTTCKS*LK RDLDLGTETMEILEENLGEVLLDIGLK/ NFMTKTPKADSTEIKINR*DLIKLKS*CTA KKS*T*/SNRQSTEWKKIFGNASDRTS
6779	14830	A	7487	117	334	LYAHKFNNLDEMDQFLQRHNTPKLIEE /HRLTVIK*IKSIVNLPKQKA*GPDGFSGE MYQLLKEIINYNVF

6780	14831	A	7488	325	353	CILKDRCR*LYAHKFNNLDEMDQFLQRH NTPKLIQEETDLL/SIK*IKSIVNLPKQKA *GPDGFGSEMYQLLKEEIIYNVF*RTDVE G
6781	14832	A	7489	3	458	KSREITLANNQCMATESVDHELGRCTN SVVKYELMRPSNKAPLLVLCEHRGRM VKHQCCPGCGYFCTAGNFMECQPESSIS HRFHKDCASQFNWNASYCPHCGEVSSK AKEVTISLKQTPRPWTPVPGQE*GSSLV GRADTTPGSGAR
6782	14833	A	749	2	333	QKRGKTLPDF*SDFG*QLNGRHTHFQ/HP VVGNGPGSGWKEKETKGAGPLCYPPSHS KVWGRGATSSVSEGGSQRAGHLP/TSPA AQQGLECRNTRLPKVRAVAVRLCYPPL GG
6783	14834	A	7490	49	457	MHNPDGSASPTADPGSELQTLGQAARRP PPP/PRGTRRPPQDTPISPETP*GCFSSRRPM PTREPPKTRGSRGHLHTHPPGPGPPLQGL APRGLKT/RRPPSVPAAGTPQGKDQED CV*G*VALPGPPGRQEAYWSHP
6784	14835	A	7491	1	816	MDEAQPQEALGASDWQTCRSRTQCLQRC KARSQSDHFKGELGVSSPRVHPQAARRP PPP/PRGTRRPP/PGPAHQPGNP*AAASPGG RCPPGSPQRLAAP/EGHLHTHPPGPGPP/P PAGTPQGKDQEDCV*G*VALPGPPGRQE AYWSHP*GA*A*APPSARL*A*VPASEQ* EGTEPLCRSVPGPVRRVLGAPARGGVCT GKAQAAGGPAELPAPTPKPEGGPSCSPG LEGV*DEANGSWLPGQAGSLPLEG*TE ASQSDSPEIR*PRRTRPSARKPLSCFSRRP MPTREPPKTRGSRGHLHTHPPGPGPPQP GPHKAKTKKIVFEDELLSQALLGAKKPI GAIPKGHKPRPHVPDYELKYPPVSSERE RSRYVAVFQDQYGEFLELQHEVGCAQA KLRQLEALLSSLPQSQKEAQAARVW REFEMKRMDPGFLDKQARCHYLKGLR HLKTQIQKFDDQGDSEGSVYF
6785	14836	A	7492	27	445	MHNPDGSASPTADPGSELQTLGQAARRP PPP/PRGTRRPPQDPPISPETLSCFSRRPM PTREPPKTRGSRGHLHTHPPGPGPPVSLD REGVPRPGL*AKDLAPAV*GTPVFPTPRF NSRPRFPVAAAGTGAPRPQNQRPP
6786	14837	A	7493	1	368	FQQNLTLISAHCNLCRKF*FSCLSWDDR HVPTCLDNFLYFW*RWGGFYHVDQAGL KLLDSSTPSAS/SFPKCWDYRHEPCTWP* KYSFLEH*LLPVY*K*IAKPFPGKQIVKT FS*GCKNI
6787	14838	A	7494	10	504	EGDKGTPVLRGFSSVSGSWSRRMPFLL LTCLFITGTSVSPVALDPCSAYISLNEPW EGTIDHQLDESQGPPLCDNHVNGGWYH FHGHGRGDAMPYLSFFTRKPLWEPTAPV WLNGSHPL*GDGIVQRQACASFNNGCCL WNTTVEVKACPGGYVYRLTKPSV
6788	14839	A	7495	84	250	NRIENPEIKLNTDSQLILPR*FNWER/DSL FNKCWWNWIFKCKTMKLDPPFIPDKN
6789	14840	A	7496	63	743	SSCLLAAFRGAHASHC*SPAHSKRPI HAQLFPLVASPGPEIPQGFAR*SCCLPVP SPGPVLPSPSWVYSPIS*LKTTYFGSAPAQ HLAAFVGLKLPQVKRSRPRSCCPGAFTG PATA*RWLPQAQVLPSPSLRPSCLTVA FPVHVTACYPTALTDQTLPSHWTV*DKL IRLPASPGQSSCLTLASIGPGAESAMVCL GPSHAFLKTLQATIWPDTFCGPM
6790	14841	A	7497	340	368	VPTICQVMS*HFHPSSSSSSSSSVINY*/ FGLLLC/QVAHFYNSIDQMIQSRPMM LQSALAFEQIHKVNGLLI

6791	14842	A	7498	2	826	LVKKTCEVPLQAGRLYLDHHQSKPFLKL HSKTHV*RCPLGIQTTGPVTLRR/AFNLR PVLSPQQRVPVEARPRKCETHTESFKNSE ILKPHRAKPYACNECGKAFSYCSSLSQH QKSHTEGKPYECSECGKAFSQEASSLIQH QRIHTGEKPYKCSECGKSLSARNANLTK HQANPHREEEALGCSECEKAFS*LSSL VQHQRHTGEKPYECSDCGKAFRHSANL TNHQRHTGEKPYKCSECGKAFSYCAAF IQHQRHTGEKPYRCAACGKA
6792	14843	A	7499	64	372	KLFFHRESVNEIKKKTIDWENICNTYE* KPVYK*FLQIN*KEIN/DQIEKWTKATN RQIAEEIIVNKHKRYCSASFRRKQIKT KKRCHFSITGKNYKE
6793	14844	A	75	3	298	
6794	14845	A	750	444	999	HSLTATALTLGSLVFLHSSPCCAAGLWA SDLPSVSLPLTQRRWLPFPKP*KWLGG* QRGPAPLVSCTPAPWFTQRRMKDGSIS HAPSPTLRHPGVGGRSPRPLAWSPVGAI GMYPLTGPLPPPQPRSWISGPSTPILSLC PSPSTRSQGFPPQGLEVCVTPIELLPEVRL KIKECLSLVSVKK
6795	14846	A	7500	2	414	RQGL/DSVTQARVQWSDQ/GSLQPRSPG LERSHLSLLSSW*FEISFRTLQQLVITGN ILGHQKITGTNHR*FMLYSSFCFFEMES HSVVQAGVQWHDLSLQPPPLGFKRFSC LSLWSSWDYRHPSSCLAYFCIFGST
6796	14847	A	7501	18	73	SYPGA AVSPAPWSPGASPLRSSPELHLRL SSSASSLALAKNALSRA SPSPAAQ/ALPSP SPLLWPLTSSPGRQASPVAPPASNGT*W GTC*PEAILGLQSAQPPGAPGPPH
6797	14848	A	7502	3	363	KTASPVQVKFCAGVALPNLKQRPLREK AQQCI*PLLMARNTGRIPCFSCNIPVLP GQKHGTEDYWFVQDLRATRQIFKAIYLV IPDAYTLFMTLTSELYW/WSVLNLKDAFI CIPLSPE
6798	14849	A	7503	47	231	NCSSVFCFPGSQRVGSILGKSW*GWVVA TGVWLLNPLKAVGQEEYSLKMEGPRPE VTCRHL
6799	14850	A	7504	1	3099	MGSCSGGERLGTSPKYSMGKWEFVAKE QCGVPCPVQLGTLRNDLSLEAQLHEYVK QGNVYKVKILKKGSPHSPRVHSLFTE GTLDPQAPDCLMARETQNQDAPCPAPF MAEEASSPSTGQPSLCSFEINEIYSGCLIL EDDIEPPGAASSLEADGPNQVDELKSM EEELDKMEREACCFGEDESSSKAETAY SFDDWDWQNGSLSSLPESTREAKSNL NNMSTTEYLISKCVLDLKMIMQTIMHEN DDR
6800	14851	A	7505	2	707	LTH*IIHAGEKPYKCEKCGKAFNQFSNL TKHKITHTEKSYKCEECGKAFIQSSTPS KQINDGEKPYNCEECGKAFNQASNLY*/ HKIIHTGEKPYKCECDKAFNQSSIFTKH KKIHTGEKPYDCEKYGKGFN*SSVLNTH TILTAEKLYKPVRCDSASDNISNFSNHK RNHIGES*KCGECNKVFKWLSHLIGNI HIGKISYK*EQCGKVFN*YTLHRKSFIFE KNCRN
6801	14852	A	7506	1	681	IVTADQLLGMGWAAIRNQTMNLNDEVI EQLWKCLDAWDKIQDDDKLPCPF*QP SDGAQT*NRIPHFNCPFKDAAEKSY*IA RANDLL*NLMAEQVNPRL/CQVAICPIK GKIPPGDVLTSYIKVCEGVRGTLRTAM VMAQAMVSIRMPGQFPKCFCSQSGH SKRNCPWHTDRCSFQHQPKFFQQAP LSTICPRCQKGNHWAQCHSKFDIDGNP LRSLP

6802	14853	A	7507	2	342	STVKGPCSMCRTIHHVPHIMGFIFGVQG WHDH/C/KSINVNHSVNRMKNNHMIIS NDAEKAFDKT**SVSIKT/L/NKLEVKGM YLYIHKVAYDRLPARIHADD*RAESFPLRL GKR
6803	14854	A	7508	1	358	VFQSFFKHRNQKVPEPPPLSKT/AKNLFA QLAENIASCLDDSSCYGYKKANIRDQWP *EAKELMPQDNFN*LFPQTDATRSSIW/L LKTSIIKKYHVTHYEKALKTHEKELTCLR HDRVGTC
6804	14855	A	7509	2	681	
6805	14856	A	751	172	431	IGRPTKQGLGQWTAVWERMERTNKSRA WPNACEGPGAVGNIAWASGLP*MLKT RAARTWVQAGVRESAQGFLNKNRRILE MGLSR
6806	14857	A	7510	670	1466	KKIRPFFQIFDGFISNVLVFAQSGFPCCLP VAPSVTS**LKA AVTAGLEVPSDVSDRA FEWLSAFPLDSPYSIHHPRIQVFLKRE GSSRRWVLEPITADSDPAYSSKVLLSSP GLEELYRCCMLFVDDMAEPRETPEHPLK QIKFLLGRKEEEAVLVGGEWSPSLDGLD PQADPAG/SWVRTAIRLCAGPELGIDLS AVTKWWRFAEVSVAAGDPPGGLQTVV VYLPGLDHHAYFGRKWEGPGAKQKA ARGSSPNPGRHKG
6807	14858	A	7511	155	359	VNSSHRDQWNRIGGP/ETNAYTYGQLVF GKEAKFI*WRKNSLFNKWCWET/WISLQ KRMELDSYLTAYVKI
6808	14859	A	7512	2	495	RKDILYSWARRFNIVKMLMLLPKAIYRF TVIPIFLLQND*TAFFAEMEKPVLFKI*SY RRP*IAKQS*SSSSSSSSSSSSSSSSSSSS SSSSSPVNSSHRDQWNRIGGP/ETNAYTY GQLVFDKEAKFI*WRKNSLFNKWCWET GFPHYKKE*SVDSYLTAYVKI
6809	14860	A	7513	155	359	VNSSHRDQWNRIGGP/ETNAYTYGQLVF GKEAKFI*WRKNSLFNKWCWET/WISLQ KRMELDSYLTAYVKI
6810	14861	A	7514	2	495	RKDILYSWARRFNIVKMLMLLPKAIYRF TVIPIFLLQND*TAFFAEMEKPVLFKI*SY RRP*IAKQS*SSSSSSSSSSSSSSSSSSSS SSSSSPVNSSHRDQWNRIGGP/ETNAYTY GQLVFDKEAKFI*WRKNSLFNKWCWET GFPHYKKE*SVDSYLTAYVKI
6811	14862	A	7515	1	399	NVLIWEDCIAGQAEVLHDSYGIIDWSPK GMFSMNCTSQS/CPWPHYVQLV*TERSD SRNDKKYKSSYYLETWQYSGPQPQMI WPAVGAHKDLWKLLIAFDKIKIWEGK YTMPSQYNPNYILELVENNTIW
6812	14863	A	7516	10	225	YCNTIIVGDFNTPLSGMDRSSR*KT/NKE TSELNYTVDQRSITDIYRTFHPNNLMIHL KELEKQGQTKSNIN
6813	14864	A	7517	37	348	WKMGLPGRPQLPQLSQEKILSLNSPNV FSSSPLK***NLPKKRPPDCFTHKFYQTF KEEIPFLKTHQEFEKKEILLKSFYEGSV V*AAKLNADINKKTTI
6814	14865	A	7518	3	353	CRLGGLKGRSREQGAVIREGEDTLG/SET EAGRPAGSLRQQRRGRPWLPVPGKH GVPTGEEHWAGEPAGWGGSVSGQAG*A ESRLSSSGHSGQKGGAVMLLAADRRRG QRRRGSG
6815	14866	A	7519	54	284	NHKTPEENIGEKLVDIGL/NNDFLDMPK AQAMKAKVDRWYGIKL*NLCTSKETIN RI/NNRQPMELKKLMANHISDKR
6816	14867	A	752	253	428	QASGVSDLQ*KLCAC*AQSQDLRGGGFR EARKTST*QPGFLLFCLLYSANKLQESV TFKDAIDFSWEEGIQAESARMTVYGE VMVENYQEPGLGKYLQTRGGPL

6817	14868	A	7520	29	261	NHKTPEENIGEKLVDIGL/NNDFLDMPK AQAMKAKVDRWYGIKL*NLCTSKETIN RI/NNRQPMELKKLMANHISDKR
6818	14869	A	7521	5	2088	LSSPSQGRGADSA/PGEFSGTQLPFGGE LVPQHQAQPHAVPAA/EVGPAWWPGAG P*TSPSGRGRPRLCPPAPGPPLPLPAAGPG SHGQPPFMLLDGL/PGPPGGSGAS/GLPG SSALP/RPRGEGVTPGIRGEGLRHTGA/G APSHSHSTCPSRRWQAGCPTLTAPPPPG WATSPPPESRCRVSGTSR*A*NPGHAA ASSGRWDRGPGAAAGPRPG*AHPA*GS GASGSSPGPEGGRARGT*PCSTEPSPGH* STGPSPCPAGGPRGRLLLPLPGPDQGRW APTSGLPLRTG/PKLQTPSTCPGR/KLAEG EAPGLMGVQVRQCEAQHTQRPVWLVV LQEQQDAVCVELEPVRVPAGPRGAADG RGCHRRQA/P*RAGPGRRPLCSCTAGAA GSFPPAPRSGQGQGLGLAPGTAAEQAA HRAEPPRCKMPA*/PGPCVSTTCPCVSAS ELGTPGSEPLAGR WREAGSSQAVGLAA\ GGGGC*DQRTPAFGS*GAGKGLRGPPG LVTLSAVGRCASEPGGASGAAGRRGRS GSPREPRVGSASRSPCG*AGCRRASSA GCRPRPGR/GSAGEKADTYSCCRAAS\G RPERPSRPGARS*TPVRVYTA/GMVGGQ GLATPGSPCCCPGPPGGRPRSRPE/SFPR ADPSGYRGLPADRHWSKGP*GPALPGPG RSQAWALLGPQHPRSPAPAGAGRGRAG HRAR
6819	14870	A	7522	45	301	AGHHHWKRGPEAPRHEMCPGSSKNQGL VQGLAGGWGKKGILKGS\STSPGEPGS GQIHLKKAGTCCGSSKDRGVNYSGR LLRR
6820	14871	A	7523	453	704	AGHHHWKRGPEAPRHEMCPGSRSGSEG ATCFARGR*RPPGNSLNVSRMGRSSYS CRRHSPAFLSWGKGRCHLCNKAHLLAG A
6821	14872	A	7524	3	543	TCCIQAAGTGGSGAPGLASVVGGAAPL WSSF*NSLP*QIRFALVPLPGCRAPGTFPA VLYSQWPFPGPQRWARSLARGEVGV LAPHPQPPTWGRHGEQSPRRHHGVGH HHQHVMALGADMRRGLAAVAALVAS* AGRVLGWCGRPARRAAQLGQEGAQGT VLALNGLFFPSRRHGC
6822	14873	A	7525	218	533	AARRAGRPHHPKTRPAQLATSAATAASP RR*GRPWGRGLGPAWRPGRGAALGA QRCGHGVRAVPVARAELGAAGFGGAA GPGAARGQCPALLPGRVEPRAARGVRT TPRPGQLSSQQAQPRRARAAYPRREP* HADDDDLLHGADRSSRFGEVHPVQGH TANPSDGGPVQQHQGHLPHRYHLHLLV *HSRPSGPPGATG
6823	14874	A	7526	3	1185	GPRR*GRPWGRGLGPAWRPGRGAALG AQRCHGVRAVPVARAELGAAGFGGA AGPGAARGQCPALLPGRVEPRAARGVR TTPRPGQLSSQQAQPRRARAAYPRREP *HADDDDLLHGAGGVSVPRGAPARWA AGGVGRGRRRPLLWPGCERSFSSSL*I* HSQICFF*SSLEQCGEWEGVYGDPSDGG PVQQHQGH/PASQPLPEWKVAEVDGA RSTEDTSWGKGAGGSS*EGGPSGPPGP GAGGLPGHNGLDGQPGPQPKGEKGAN GKRGMGATG*L*RYGWHLGASFALL *AGHHHWKRGPEAPRHEMCPGSKGSFR ENGHTPSKPAQSSEGQ*LPHSPYQSGRW QKLLMGQGVQRTTHHGAREQVAVPRKV DLLDHQDLREPAGCQDTTDWMDSLVL AQKEKKEQMEKEEKWGLQDNYEDMAG ISEELPLPCYEQAITTEKAQKHQGTCA GARAASEKCTURPSQANOKASVLI

						QGARAASEKTGTHRPSQLNPQKASNYH WNYTAAMDRSYRIIIIIHEHRCRIMMPIG LSWEVLQKCDSVLRPRQWA
6824	14875	C	7527	35	217	MXDSRGRXPGARTYRESPGPXXRMXGR SREIARWPRRRPLAPLLHRLLPSPRPGIC GGAA*
6825	14876	A	7528	2	342	RALPPPKDPSLLSSIGSYRVPAPESEVEGPL /SPWERKQPGERPLSCMS/GLPQLRVGGV RG**EPQGLPDGDPAHTRCGAEPSELLD SLPQDGVQDAAAASFLHTPSQTPCVQRE
6826	14877	A	7529	2	440	PRVRPRVRQSSHLSWRCRVPPPPPTMCL SAHPAPGPDPGTSCESHVPMPTIAQWG N*V*RGEITCLKSQE/GKS*GHGASCPMT GELKCPHCWG*TGPHQLPG/MSHMFVCI LRGLAGSPARTAARGFLEVAFFKGTIPE RKPLM
6827	14878	A	753	963	1497	NTALSNEEILVMALVVISFLSLTFFQLME GTRLNKLWGFIPRTL*FSE*TLSSIKAKL LTILTPSLKFNREVKNEVCHFVEWFSY HNNLIKMPFISMFTPLNKMKAFTFICK MTVNINNMHQSTTYAKGEEHLMGCYVN CKLRTACFMAFAVKKLLAFNMYFKIY SCLGENF
6828	14879	A	7530	3	471	RALAAAERPLAPLLHRLLPSPRPGICGGA A*PWERKQPGERPFVPSQYLPSAC/GASP PG/PLGTGRGHGADDAPRRTS*ISEVGSV SVRDPG*IEQSDGRLPIGHSRWDERGLR GLGFVTGK/PWIKGGAILPVGPSKVVLG YTGRGAGLARSLOQY
6829	14880	A	7531	2	1021	FFFFFSCETTIENTLIFFSGEVSNLILPIPVGH K\GL*GGVKEEGCGCVLGLRPAVGSAG MAQPSAPGVQAGSSILEEGLEVLSQPR PSRGSQGPVSPSWKVLQQPVRRTPTPH ASWGKPTHASSFVGGLGAQGGKRMPLG GPGCRPAPGLGAHLYVVCPEFSAPIRGL RSGMVPLKKAATS*DTSGSSPGLGEPASP QLHLFN*SLRGASSVPLSTASPPPEPGLR TQALGRY*ETGKWPFGLPLPRLSGPST DSGAGTR*EPMEERSEGLG/ERPARDPP GSVPTCGWRGRGSPGTG/LPGQRLGR ALRAAKTRPGTCRATDRGVPPGLPRLCR
6830	14881	A	7532	40	403	QWHLAACSNLASAVSFRIFLYYGERRP SGGARPMLTSPSLTAWINPLSQLL*YL AAEQQLHRGPPRTAPVSGAE*RWTF/L IARTHCLRRGQGRQPPPVSGATGAPSFPL QQMPRR
6831	14882	C	7533	182	289	
6832	14883	C	7534	50	223	MEQLCTKVRRFKITLLALILXXXXXXXXX XXXXXXXXXXXXXXXXXLSILYEWYPCH LK*
6833	14884	A	7535	3	398	SNLASAVSFRIFLYYGERRPSGGARPLLT SPSPTAWINPLSQLL*YLAEEQQLHR GPPRTAPVSGAE*RWTF/LAHTHCLRR GQGRQPPPVSGATGAPSFPLQQMPRFT

						PGASSSHQEATKSSTREF
6834	14885	A	7536	287	568	CLRDGSPEPSCGLHCHCPACQ*PTPHPHY KHPAGESIPGNTTPMSASRKR PASPT SRL RAPPALILSFLLCCKMGTLPASRG CWKE RSEIVLK
6835	14886	A	7537	574	1266	SIPCPSSSFSTWLQSSRNFTEDILASVLISA STQSAQSRSPQNQNLCKGGSQAAPPASS HPISSHGWGLCLDDPPAKDIIDFPLVLPGI PYAVSHQCRLQYGAYSAFCEMDMDGDS LISPWAKYPKQRPQGQVFIRVPKHKMQK GSACPLWPVRGKSLPVKMHNPGLAGR WKSS*STWT/IQS/RSCGLHCHCPACQ*PT PGPHHKHRPAGESIPGTTNFCFEKEACV PYFM
6836	14887	A	7538	1	785	NRQLSCGTALSTTGGIYIGERSVRVWGH RFHCLGNESLLDNCQMTVLGAPPCIHGN TVSVICTGSLTQPLFPCLANVSDPYLSAV PEGSALICLEDKRLRLVDGDSRCAGRVEI YHDFWGTICDDGWDLSDAHVVCQKL GCGVAFNATVSAHFEGSGPIWLDLNL CTGMESHLWQCPSRGWGQHDCRHKE AGVICKFTAFRLYSETETESCAGRIEVF YNGTWGSVGRNITTAIA\GLCCRIHLGC GGRNGC*PPCIHGNTVSVICTGSLTQPLF PCLANVSDPYLSAVPEGSALICLEDKRLR LVDGDSRCAGRVEIYHDFWGTICDDG WDLSDAHVVCQKL GCGVAFNATVSAHF GEGSGPIWLDLNLCTGMESHLWQCPSR GWGQHDCRHKE DAGVICKFTAFRLYS ETETESCAGRIEVFYNGTWGSVGRNITT AIARIVLQATLAVGEEMDANPSPL
6837	14888	A	7539	1	1113	
6838	14889	A	754	1	363	WRESPHSARPRLEPQCYDLSSLQPPGLK* CSHISLPSSRDYSCCATMPS*IFCVFGE MRFHVAKAGLKFPSSNPASGIPKCW DYRCILGQFSSFEAKPRMLIFTLFIICSGH VMMS
6839	14890	A	7540	1	214	VAFFKSAGASVQEKQAQLQEQVKEQRV CCQRLAHPVASAQKEPEAARGPGAP/WA WGRV*QLYGPPEGEGRP
6840	14891	A	7541	3	141	
6841	14892	A	7542	39	210	
6842	14893	A	7543	72	353	QRCPPGGHIYSHKFSFNDSVLPGTVVCESP QPNGPGFDPTVWQWGRPIYHRHSALRL QS*RQSGSP*VCLAGSLLCCPWRLGHG LCQAHPGQ
6843	14894	A	7544	5	726	AAILYSGRLSSQPVVVEIHPYTYDTSTS GTVKIPGAEGLRVEFDRQCNTERRHDPL TVMDGVNRIVSVRSGREWSWSELRI GDELKWKFISDGSVNGWWRFTVYPIM PAAGPKELLSDRCVLSCPSMDLVTCLLD FRLNLASNRSIVPRLAASLAACAQLSAL AASHRMWALQRLRKLLTTEFGQSINIR LLGENDGETRALSFTGSALAALVKGLPE ALQRFQFEYEDPIVKA
6844	14895	A	7545	441	1009	GLSHGRNTGPLTTSQASTSPRGNNPRAC VARTRVGVPATELLWMEEMRCVQLFCY SKARSQCSHQG*DV*VFYQPACWVSDT WHYLQPLTDSG*YA*KLS/D*VMSGPILA TGPTCSHLA*LLDSEPLERSVSSFCCKWDV RLLGKTSLCCVGLAALSSSEIFNCLLGVF VWNLASCLCGSACCRVFLRDT
6845	14896	A	7546	59	378	

6846	14897	A	7547	31	302	KGRRVLWWGDKNHERSWHKGVMGQR VQDRQKRKLCQLMGKKRSQRA*ILSGTE HLHVHSHLLCQQQVSTGRALHLLP*RI WRARAKNEQ
6847	14898	A	7548	1171	1731	SPRWSAPRSPSGAPSDASCDGLVPMNGR KMACWPVDIPKTDWSPNPWQEKREIVS SEDAVTPSAVTPSAPSASARPFIPVTDL GAASIIAETMTKTKEDVESQNKAAAGPEP QALDEFTSLIADDTRVVVDLLKLSVCS RAGDRGRDVL SAVLSGMGTAYPQVAD MLELCVTEL*NPRSRT*CFSCRACDEE VSLALECWEPEELPRTQSPALTQRAQN TMNKLNFHNRVMQDRRSVCIFLPNDESL NII/DKCLVFSWGDGDFGKLGRGGSEGC NIPQNIERLNGQGVQCIECGAQFSLATK SGVVWTWKGKDYFRLGHGSDVHVRKP QVVEGLRGKKIVHVAVGALHCLAVTDS GQVYAWGDNDHGQQGNGTTTVNRKPT LVQGL*GQKITRVACGSSHSVAWTTVDV ATPSVHEPVLFQTARDPLGASYLGVPSPD ADSSAASNKISGASNSKPNRPSLAKILLS LDGNLAKQQALSHILTALQIMYATDAAV GALMPAAMIAPVECPSSFSGAPSDASA MG*SP*MGEKICLLAC*YSENRLSPNPW QEKREIVSSEDAVTPSAVTPSAPSASAR FIPVTDLGAASIIAETMTKTKEDVESQN KAAGPEPQALDEFTSLIADDTRVVVDL LKLSVCSRAGDRGRDVL SAVLSGMGT YPOVADMLELCVTELEDVATDSQSGR
6848	14899	A	7549	2249	5398	KCHLRAGRCRDVTAIFWLQSSFMQLEE KADLRKSITFYQNQQGGRKDAALGGGH HQAGAQQGDEGEAAGAAADGVAAYS YNNGHRKFLATAQNPADPGPGAPAPQ ELGAAGKHGGLPNLRLSFKLALIRDMAI LPFQWNLLISFNAVLGLVFSWGDGDFGK LGRGGSEGCNIPQNIERLNGQGVQCIECG AQFLLALTKSGVVWTWKGKDYFRLGHR SDVHVRKPQVVEGLRGKKIVHVAVGAQ HCLAVMDS
6849	14900	A	755	1	433	FFKNFYRINRDSYYKAAKFFPVLCSISFH SYCSTLPQAPLPQAWLNLRSSGVFLLLI SIVRADVPTPFQILGLILEAPPSQSYLPFS SMDGLMLHPNRKVQGLTFSRPGVAHT CNPSTLGGRGGRIA*GOEFETSLGLSIS
6850	14901	A	7550	1	609	AAATTTTKLAAARQPLPGGGGESAVGA GAGREVFYILFATASAKRGGRKAKRTPG AQSSGR/AVLPSLGPPGRFLAGVC*GSGG PSPFSSPPPNHSG/Q/PAGGEPGNRGPKM GVLAYSLHL*VPCGVSRNTLPAGDGNPV P*SPFLSFTWSP/VP*PWG/ANGPWWADP PPSTHTVP*PSGPPGASGAGPPPSWPRPA KGFAPRGL
6851	14902	B	7551	222	360	XAVLALRPWDVEAEQFLEVSFLLFFLFS DPRPRDRLRLLERLREPT*
6852	14903	A	7552	1	601	RDTSRNCSTASQCRKASTAPGAEG/DGP QASGRGGAVTTRGSRASSGRGRSVML CSRA*DVRARRRRSQARGSSGKLHLCSG KPLRKRSRSPAPGQSRGRRFTSSPP GFPAASPCITERSRQKARRRTRSSSSSS SSSSSSSSSSSSSSSDGRKKRGKYKDK RRKKKKKRKKLKKKGKEKAHSRQSIIR
6853	14904	A	7553	42	384	LKSAALSHGGAKQAGDPNLHPLPLRRD WAGPETNPRGKGHGHPSGFLAP*NLPR LGRQRSSTGLGQRGPSGKQPSSHLEGQA VPSGRLAGEESTQDGRGTSQTDAGGWM AGM

6854	14905	A	7554	1	713	AKGAGLEARGAMAHVGSRRKRSRSTRS RGRGSEKRKKKSRKDTSRNCSASTSQGR KASTAPGAEASPSCTERSKQKARRRTR SSSSSSSSSSSSSSSSSSSSSSSDGRKKR GKYKDKRRKKKKKEEESLKEEGQRKKA EAQ/RGRASSASVDP*DGAHQAY*REM /DEGPKRKS*PKNDTERSTSQTQRTAD GHCQMOSDGYASREGPPHGQGPDGRQL AAQPGQVSGCQWEA
6855	14906	A	7555	2	642	HALTTAFNIVLEVLVSAVRQEKEIKSVI GKKEIKLSLFTDDMIVVVEYPKIDKNA/L LEISNFTRVVGYKVNTQNSVTFRVYHQ *AS/EYLKLLKILFALEPPKVEYLGSNLTK HAQDLYEKNCKTLIKEIKELNKWREILC G*KYSVFKMSVLLNFVYRFNAVPIQIPVS CFVGI/EQT/SLKFIWKAKRPRIANSILIE NKVTGLTLPFFKA
6856	14907	A	7556	3	577	TSNECGKTRHNSVLVIHKTHTGEKPYK CNECGKVFNRAKLARHHRIHTGKKH* KYEEDKVYIVNQVLKDRRIHTGEKAY KCKS/CDKNLGRDSHLAQQTRSHTEGP YKCTECGKAFSGQSTLIHHQAIHGIGKLY *CNDYHKVFSNTTTSNVHWRIHNERF*K CNKCGKFFRHCSYLAVHR*THAGE
6857	14908	A	7557	286	336	GL**NTTS/PKISTEYISP*AKPPVMRGQD SVLYHSDYDEEEWNRVWANGKSLSCS IAMVDKLIERDGGSEASGGINDGEKERSL TDAIPSLPREDWYEQLYPFILTLKECV
6858	14909	A	7558	2	246	RPLKHTLVTCDKGGL*FEPFVSG/PPRC A*GDGTPKEVPFIGTATFYHYLPTAYGC MLTST*RKVEETELDDFYDGNRRGR
6859	14910	A	7559	3	348	GWRLVRPLFMGHRQPVISGLQPEQPLHL KL*FLCSGVSDCASFPV/QSPEPKVVFAL EQLARRKLQAEAGASATLSCEVAQAQT EVTWYKDGKKLSSSSKVCMEATGCTRR LVVQQ
6860	14911	A	756	362	567	PAPTPGTWDYRHKSPCLANFLYFY*RGQ FHHIGLAGLELLASR*STHLGLPKCWDY RCEQHVQPENIF
6861	14912	A	7560	16	220	HREMKTGNDLKILQKVNKLWHLYTTAY *KRAIKKSKLLVHTKATWVNKGVVLSE *SQSQRVKYWSTRP
6862	14913	A	7561	204	868	KGNQVSHEYSWKFRITLSL*KQF*VLKR YYRAVKLVNMSNIAEHPGFMKTGECL RCMFWNNGCIHFAMSKHNLGIFYFKK ALQEE*QCLCTAPVQVALIQVKNFQGRP MCTLLNPIRGYELLVNCGISLLHIGRPL AAFECLIEAVHVVHANPRLWRLAECCI AANKGTSEQETKGLPSKKGIVQSIVGQG YHRKIVLASQSIQNTVYNDGQSSAIP
6863	14914	A	7562	1	1047	MVSISWPRDLPASASQSAGITGLIGALVL SVGIYAEVER/HEI*NP*KCLPGSSHHHP PGRRHVHGLLHCAGVPP*QPELLASL RLSRGYGLVLSWLEPRYEKMISGMYLG EIVRNILIDFTKKGFLFRGQISETLKTGRIF ETKFLSQIESDRLALLQVRAILQQLGLNS TCDDSVLVKTVCGVVSRRAAQLCGAGM AAVVDKIRENRGLDRLNVTGVDGTLY KLHPHFSRIMHQTVKELSPKCNVSFLLSE DGSGKGAALITAVGVRLRTEASS
6864	14915	A	7563	77	2246	
6865	14916	A	7564	1	475	HIKNMTFIYFSSFIFCFPPRWSL/DSVAQA GVQWRDLGSLQAPPGFTPFCLSL/LQS SWDLQAPRHRARLIFYFLVEMGFVTL ARMVIS*PRDPPALASQSAGITGVSHRA RPETYNFCSFIHSSLPVEPEARKMTKNSD IGEWINLGTCLIV

6866	14917	A	7565	3	362	SAIIV*DINTPIMGGTTTRQMINKEIEDVNS AINQEDLLVIYRTLHTAAAEFTFFSSLHE VSSNDMMLGH*TSLNKF*SIEIIQNISDH KGIKFEINNKEI*KIHKYVEISSTLLSKQG
6867	14918	A	7566	188	1055	VIKAAEGDSGSAWVLDEADPTGGPGLG CRGTKYLLRSGAGGLSD/GGPCPGTDL ALSPKPPGLHGPPSPALAG*DLSRLLPR AHSENWPGAAGGGSHRA*VGS/ADQAD NDTEGNNKDPGRPQAQPSCRGSLGPATG RSGWPYGGP*PTWGGQGPVSTPREGPAGV RIEAKGKS/NVGGTGGMAPSPSRTCNNLS LPKLSGVV*EAWNPGRADVHIMHAVGLI KTSHEWLDPPADSQAGSCGASGOEPQPA ASGSAAWRRCSQGLGRLRHQQQEEGP SSQHVGVGCVPCGG
6868	14919	A	7567	2	380	AR*LFSRVNHMVGHKLSLNR*F*KIDIIQSI FYDHNSMKLENNNNKRKTGKFINLWRII* IYIL*TTHK*KKKITREIEKYLEMTENRNK TYRNLWDAAKVVPKGFEIAIGA/SL*KG GKSPIQVS
6869	14920	A	7568	1	370	GTSAWPQYKLDNDSK*PENGTFEFSILQ VLDNSCHKMGKWSEVPDVQAFFSHWS LPSLCSQC/GLIPNLSSFSPFWSFG/PPPQV PSP/TEFFSMDSSDLPPSPQAAPRQAEFG PNSHLASAPPY
6870	14921	A	7569	3	369	HEVKTMKILEENLGEYLLDLVGKDFINR T/PETIS*NKIYKFNFIKKNFCSLKDILKEI NRIDWEKIVTKHSDKGLVSRICKFHDSV /YKMRTQFFPKDKDLGRYFTNKET*MV ASGHLKMC
6871	14922	A	757	204	389	DMGYDVTRFQGDVDEDLICPICRGVLEE PVQPCQTKVICILGQV*GEAHDYHAPYC EHAFC
6872	14923	A	7570	1	2722	MGSAPVPSQACLEALLIVPWGACGVQSQE EEESPAEGSKDEPGEQVELKEEAAPVE DGSQPPPEPKGDATPEGEKATEKENG KSEAQKPSEKAEAGPEGVAPAPEGEKKQ KPARKRRMVEEIGVELVVLDPDLPEDK LAQSVQKLQDLTLRDLEKQEREKAANSL EAFIFETQDKLYQPEYQEVSTEEQREEIS GKLSAASTWLEDEGVGATTVMLEKLA ELRKLCQGLFFRVEERKKWPERLSALDN LLNHSSMFLKGARLPEMDQIFTEVEMT TLEKVINETWAWKNATLAEQAKLPATE KPVLLSKDIEAKMMALDREVQYLLNKA KFTKPRPRPKDKNGTRAEPPLNASANRA FPSPLTPWADQNVLSTVSPYPKILGKGET MVVPRVFGRMVGKSREAVAQAMVLEM FREEDYYNDVLDQMGASILGVEGPRR HPDEPPEDEVFELFPMFMGGLLSAHNRA VLAQLGCPKLNDALENAQAIKKLGLKL GRQVLPPSELLDHLFFHYEFQNRFSAE VLSSLRQLNLAGVRMTPVKCTVVA AVL GSGRHALDEVNLASCQLDPAGLRTLLPV FLRARKLGLQLNSLGPEACKDLRDLHL DQCQITTLRLSNNPLTAAGVAVLMEGLA GNTSVTHLSLLHTGLGDEGLELLAAQLD RNRQLQELNVAYNGAGDTAALALARAA REHPSLELLHEVQRNLNSWDRARVQRH LE/HP/SCGIWKIAGVPPLILGARPSCCEW RARAPSKSPLRRCPNSHPASVM*PA*T NLSIPWCCVASSLLRRCGSQSL*PSS/HPA AVSMETYHVTTLPTQRGEEQVELSTIE ELIKVP*SAPSQP*WSTGLALPQEA WY PVRSH*CPRLSQSPDLTGYSYGSFGHL TWEMSWKAPRNCV
6873	14924	A	7571	2	394	

6874	14925	A	7572	1776	3257	TNLSIPWCCVASSLLRRCGSQL*PSSPPL PSPWRPTTSL*HCHQHREVKNKWSSPQL RN*SRMP*SAPSQP*WSTGLALPQEA YP/REKPPMMPQAQPAIPRNRLFLRQLR ASH/CGK/WSWKAPRNCAV*LNSTTPCS RSGPSRGLDPRWSGQKTWHLLGSQA* ATTPGPLMEL*/ELFNPDACGRRVQTVVL YGTVGTKSTLVRKMVLDWCYGRLPFAF ELLIPFSSSLCQLVAQRYTPLKEVPLMA AAGSHLLFVLHGHEHLNLDLFRLAGTGLC SDPEEPQEPAAIIVNLLRKYMPLQASILV TTRPSAIGRIPSKYVGRYGEICGFSDTNL QKLYFQLRLNQPYCGYAVGGSGVSATP AQRDHLVQMLSRNLEGHHQIAAACFLPS YCWLVCATLHFLHAPTAPAGQTLTSIYTS FLRLNFSGETLDSTDPNLSLMAYAART MGKLAYEGVSSRKTYFSEEDVCGCLGG WASGRRRSFSLHIFRSGWP
6875	14926	A	7573	201	1436	PCDPREYP**ATSPTRRSWPWSISHPRPG S/HPLALSQLFNPDACGRRVQTVVLYGT VGTGKSTLVRKMVLDWCYGRLPFAELLI PFSCEDVSSVGRAPASMCQLVAQRYTPL KEVPLMAAAGSHLLFVLHGHEHLNLDL RLAGTGLCSDPEEPQEPAAIIVNLLRKYM LPQASILVTTRPSAIGRIPSKYVGRYGEIC GFSDTNLQKLYFQLRLNQPYCGYAVGG SRVSATPAQRDHLVQMLSRNLEGHHQIA AACFLPSYCWLVCATLHFLHAPTAPAGQT LTSIYTSFLRLNFSGETLDSTDPNLSLM AYAARTMGKLAYEGVSSRKTYFSEEDV CGCLEAGIRTEEFQLLHIFRRDALRFFL APCPEPGRAGTFVFHRRARHAGIPRCPLH CAGFAQDDPAKGGQSG
6876	14927	A	7574	1	376	PFLPPYMKINSR*SKDINVNFKSGSSSSSS SSSSSSSSSSSSSSSSSSSSSSSSSSSSSS SSSSSSSSSSSSSSSSSSSSSSSSSSSSSS SSSSSSSSPL*KKNTPIKKWKMDMPRA
6877	14928	A	7575	288	468	KAEAGGWLEPRSSRPWRREAGAGQSP GPG\GRGCSEL*LCHCAPAWTTE*DLASK KKKQK
6878	14929	A	7576	1	378	YRKP/TADNIINGERLDAFLRPGTRQG/T PFLLLLFNIVPEVLVRAIKQDLAETIIVI*IR KEEGKLSLCTDDMIFYVENPKEFIKILLE QISS\QVAEYKINIQKSVVFLYTWNEQSK YEIKIISRA
6879	14930	A	7577	840	1093	QHKNLVL*SGRR*LLSQQES/GIFFTLVI TTFCWER*NRRILSQI*RTMGARHFQEP VIPAPWEAKAGGSLEIRSSRPAPWPTW
6880	14931	A	7578	254	701	KTGKEGPVRWLMPVILAPWEAKAGGSL EVRSSRPAPWT**NPISS/KNSKNIKISLA WWCTPVVLATEEAET*ESLEPGGRGCSE PRSCHSTPAWVIGAPSQKKKKKEKQARR SWLAGHSGHLHYASYAGRCGRVGGLE PRNSRAAWAT
6881	14932	A	7579	12	154	CLCMSTCMCACVCSVCMHICVDCVC /CVCVCACAYI*LRVCVLVCVFLYVCIFV SVIVCVCVCVRIYLAFFPKSLLK
6882	14933	A	758	381	1335	DMGYDVTRVQGDVD*DLICPICSGVLEE PVQAPHCEHAFACNACITQWFSQQQTCPV DRSVVTVVHLRPVPRIMRNMLSKLQIA CDNAVFGCSAVVRLDNLMSHLSDCHEHN PKRPVTCEQCGGLEMPKDELPHNCKIKH LRSVVQQQQTIAELEKTSAEHKKQLAE QKRDIQLLKAYMRAIRSVNPNLQNLLEETI EYNEILEWVNSLQPARVTRWGGMISTPD AVLQAVIKRSLVESGCPASIVNELIENAH ERSWPQGLATLETRQMNRRYYENYVAK RIPGKQAVVVMACENQHMGDDMVQEP

						GLVMIFAHGVEEI
6883	14934	A	7580	139	350	AIMAPNFPS*VKT*SQEDGQTPNRIKLLK STSRHII/IAEN*/LAK*NILKAVREKWLIT CRRTVISMTMDF
6884	14935	A	7581	17	245	GG*GCSCSEL*SCHCSPA WVT\SKTLTQK KNPQF*QVV*NI*IPCLLIDFSEFGLFLPKS YCYQCKVTLQCSKSL
6885	14936	C	7582	82	300	MLGIFEG LQINQLVETGLKRWLRLNSF LKRFCYLLKSLSRSSRTTTTAFVCDGR WIMQIPGSVLPFPQCW*
6886	14937	A	7583	1	772	KENLITFPRIQPISKDDFRRYRGAIARKRI RLGRKYVISHKEEVPLCIHWDISKQASLS DSNVEALKKLAARGWEVTSTVEKIKIY TLEEHDVLSVWVEKHV/VEVQHI*LIRLL SDFTKRPLWDPHFVSL*SHRLG*VKDDQ LYHITCPILNDDKPKDLVVLRIHEGKPLK DGNTYHS/VAVKSVILPSVPPSPQYIRSEII CAGFLIHAI*QQFMHSYLTLTICLLGILPY FGWEILGGLGPKSIGRKQQLVYSS
6887	14938	A	7584	3	307	RFTEHHRTLTGEKPYECKECKGRLLSNT ALTQHQRHTGENPFECCK*GKAFNQKIT LIQHQRVHTGEKPYECKASGK/AFSWCG RFLHQLHTQKTPVQA
6888	14939	A	7585	1	374	TGVTAAATQASWTPPIDGPTTQEKLS*A NTAPGTEGEQQVHGEKKEDPAVPSAPP* YEESTSGEGRKAWAFPPAPTGEFHPNW AYVDPNSNSRYDNGVPITGDHEL*TTFS WDDQKVRRVFVR
6889	14940	A	7586	1	512	
6890	14941	A	7587	1	399	FFFFNYITRYNKHYYKMSKKRCHKIF QMIDMLNAASCAALGRHSRWVLGGAH PTPP/GSAQAPAPWSHAMGARTLPPRFR SFGHSSATPKVSPSAAMPTEAQR/LPGC GPGSDFAGHPQC*PPQVQIPTSC
6891	14942	A	7588	49	430	KWWKVCVGDMLCASI GRSEAFKTS FQFSLATSEVCGHSSATPKVSPSAAMPTE AQ/QTPPGCGPGSALLGIRSADHPKCRSP LRVPPPRSTSKVLAPFLASSDHLEHTCS SQVRLPAAVRGAST
6892	14943	A	7589	467	1518	LANCRCVPGGHWMQEMVRELWMWNV EEEEHEVGICTWGGQHC GCPAKSLPGPH PGGVSAPQSASQLMVKLLVWQKSVHKL RKVSATSSIAVYPCPGQSSGGAESPAPGP GLAGWSHL CGAALAEVQAAPVSQA AVS DASLGPEWSQEGCRPGLTSGQHGGRDG R*RGSQRQGD*QSPSPGIPASSAAL*VGL VLVKWRPVHKA YDPVPEASPLSANFRN PGPAEAPGPMGKTKGRGSAGGAIGAGS AGLAPPPRSSQGAAGIGQ*PGLPEEAVHP CKGSCPASSLSAGTPRAPPHPCLGPRR QGPCSHGVTPGCRSLG*AGGVG*APPRT QREWRPRAAQEA AFNMSII
6893	14944	A	759	1	1236	
6894	14945	A	7590	296	423	MVI*KL/PYKKSQGLGTFTDEFYQILKEE LISILLTLFQKIQKE*VTYKKSQGLGTFTD EFYQILKEELISILLTLFQKIQKE
6895	14946	A	7591	3	167	VYTKILRADRDMLTGYPCCSTGLLTADD ***DNTLEV/IALRRGPFYLEGLDLSPK

6896	14947	A	7592	19	406	PLQELGGQSLSHYVGGRAPGPPAPGHP PVQSLQRPCVPTQQLLTPFWCPAL/RQQ Q*GHRQGTGPVPTPGPPLKGQWQQGPP QKEWQMRPKAFGHHPGGLCQSLGGAPR RWNRDTYQAGPRQGGCGLM
6897	14948	A	7593	2	3532	
6898	14949	A	7594	3	300	KGPWKQENVEAEASMVIAVPEPFGGAIH GQESITYHNGDKYLAIAPIIKQSTIVCHN RVDP*WPQDTLLGDMEGRLFTALQKNP TEKKIPQALQQAN
6899	14950	B	7595	1	819	MARGSAGLVLGRGRLHDWQLGSGHSAP GMLGQVALAGRTELAVPSLDTPGGGEQ RASDLSRTLSSSHESDHTVRAAHSPLPAE ALTRSLPCLQNVAVHRLYIKCQLDFGGD SIAVGTPWYPMVWIPVWVWIPVWVWIPV WMEHTVLIHLFVGGHVSGSHLSAPVNN VCGNVAEPPALCGTKASKPPLTPPIRS KAKFLGGSVCLGRHNKLSQTRWLKQQT FISHDPGGWKSNIKLTRPAQDLLMSVCM NCNTHGSEDMDVISHLIKIRLKP*
6900	14951	A	7596	2	3235	SPASPAGRSAAHGSASPSGSPHPSWCTV GRSSCWSSPSP*ASSSGTPTQPGRCSL G*MRRRPAGGAQAFQLKGKKWRRFGG W*PRWEAGCFQGEW*GATDSRTASNQL GPPHLQHLHINPPARQPPAFNRVVKQAP WRPQARAGAPGKPDQDAHQRVLQNG HLGAQTQEEVAVTLGWVPLVVLRL LCGTAPCAGSARSPRGELADGGDHSVE PPDGIPLDG/EQSGSGMSGALPGSSFLCP RRCRP
6901	14952	A	7597	2	1065	HMILCVENSKDSTKKNLLDLINEFSKVA GYRINIQKSMAILFTNNLAESRKQCPF /TDNIHLRIHLTKMKVHQYSLHTENH KTLMKYIEEDTNK*NDIPCS*IGRINVVK VSILPKAIYRFNAIPIKISSAFFTEIEKUIQF LWIHKRSQITKAILRKKNPGGIILPNLNL YKTRVIKTIQYWHKRYTGQ/WK*PEINPN MYG**IFDKSTKKT\WEKGSFNK\WC WDFTCRMLG\PYITPYTKINPKWIKD LNVRT*SHKSRKENIRGKAPWTLGFGQC FLGYHTKTSGYKSNNK*MKLYQSKLL HRTKTINKMKRQCTDKEKIFANHISGKV LIFRI*EELIQLNS
6902	14953	A	7598	3	333	TLLPEIQAYTQEQWLGSPEEATAALAERL QQESAGPGLQMNGGLVLGAWVCLPP/SS RPPAEPSTGAQSWVGG*EGPGCGKVM VTGGSLLVLAWESEISSHTCVLRIVS
6903	14954	A	7599	252	684	HLFRQLFLEVLMSLQSPCLVAHSASRWC TAPVTADAPSLWRALALWLWLAHGQGP GTGWPVLSLRRRSASRLAASSENPPSR NIH*SPQRPVCSRGSPGATCPLGLPRTSP GATRPGPVSPSPRSGLAAAPGLAPAST PP
6904	14955	A	76	189	442	KTMRSIRSFANDDRHVMVKHSTIYPSPE ELEAVQNMVSTVECALKHVSDWLDET NKGTKTEGETEVKKDEAGENYSKDNG*R TL
6905	14956	A	760	55	792	GRAGACSLIDTAMSIESSDVIRLIMQYL KENSLHRALATLQEETTVSLNTVDSIESF VAELKSGHWDTVLQAIQSLKLPDKTLID LYEQVVLELIELR/ENLGAARSLFETRPDP MIK\KQQTQPERYIHLENLARSYFDPRE AYPDGSSKEKRRAAIAQALAGEVSVP SRLMALLGQALKWQQHQGLPPGMTID LFRGKAADVKEEFQTLRHIKFGQ KSHVECAPRAEFVQRRSN

6906	14957	A	7600	156	888	FRSSVSPGSGPPFSVSVTGS GCPS**HSGR PGVLVLKLPQGS*ASLPPAFPGGSDVAA GRGLSSAADCFSLTGLGLATPVFLTSN LKLLQESVPK*LNSASS/PGVPRP*LQMH RLCGGPRSLAVVGTRPGARNWLASAFS/ VGGGQLLGLQHPLQKIPSRNIH*SPQRP VCWKAGRRTKPRVDLQALETCPLGLP RTSPGATRPGPVSPLPSRSGIAAAPGLA PASTPPLSPGPTPLPP
6907	14958	A	7601	231	457	QWLSLLPLGLGEDTKSLRANTSNELEHS QATIWEEGGPTSSSLWRPFNFGSPTNRN PKLMPAVQPPHPSG*TPSVTWLHISWR WSP*GQSKASLPLPLWNSTCYPQTNKE TKTQSALSTPTNCNQPKERRPVCLPWV PPTSCSSTDREPPAWAHSTDPSPCDGTAK VPSSAGSKLGRKHHPRAAVGS LGASSHN LKAMGEEPTL/VTALRGSKVTTV/SETTR PRKKLSTDQYT*APPTGSHPKASTPKIRC CVSPFSRCYEEIPETG*LIKERGLIDSQFH MAGEPSGNLQPWRKAKEKQAPSSQSGR TE*VPAGEMLDTYKTIRSHETHSLSREQH GENHPYDPITSTWSHP*HVGIMGITIQGEI WVGTSQTISLTYPSP*NQKEVS NK*RP PYGRREDQPLPPCGGLSTSLVPQQTGTPS SCQQCSRPIV AEHPQ
6908	14959	A	7602	2	289	LACYSPFPGGP/PSSPPPRAGGSNPPGPPG LTPFPKK/AKKLL/RPSSSPFLPPLGRVG PGDSFYPGGEGFP*PRVPIT*NWGPFPPPR GTKKKLPF
6909	14960	A	7603	3	805	DRVSLLLPRLECNGAISPHCNFRPRGSSH SLASASRVAGITGVCHHA*LIFVFLVEME FHHAGQAGLELLTSGDPSPWPSPKV/YRI TRHGATATWPYIFKNFYTRPS*NSLSLK RTS*IQMPAL*MERLQFVCPS/LAEDLTK F*EKQDSKFTSQNREN*AFSRRS*GMLEK D*KWTTSDIV*VFVLFKSHVEMLSPVLE VGSSRRFLGHGGRSLMNGWVLSLW**V SSYISSCESWF*KESSVFLTLLPFWPC DMPAPPLRLPP
6910	14961	A	7604	75	484	EIQLVLSLKTSLNKFKKIEIISILSDHSGI KLEINSKGKLNHANTWKLNNLLNEH WVKNKIKMEIKTF/FELNDNNGTAYQNL WDTAKAVLRGKFTALNAYIKKYERAQT DNLRSHLKELEKQQT KPKSSRRKKK
6911	14962	A	7605	3	1105	
6912	14963	A	7606	802	1204	VLEVLTRAVRQEKEIKGIQIGKEEVKLLL FADDMIMYLENPKDSSKLLGLMNEFSR VSGYKINVHKSVALLYTNSDQAEQIKN SAPFTVV/SKKK*LND*IKYLGHLTKEVK DLYKENYKTLKESIDDISK
6913	14964	A	7607	3	419	RVECVVGLLEYDRSAAASNTITQVVVTHI QALSHEQ/SAAYTSFSNKHESFSRIHLLL GHKLGLNHF*NVGIM/PN/IFSNPNRITL NTRSKTEKSTNLWKLNNLLNSQQSREE IPREKENT*NENENAAAQHLQDAAKAA
6914	14965	A	7608	1	341	RMGTCVNPRSLKGFGPRPGKKKQSSP LKS/SPKMALMGGNPGGAPPPFRFLFFNF RFGPKKSSSPAPIFFFLKKGL*INFGPPREP GGFNQKPQFPSAPGFEPWNPPQGPKP
6915	14966	A	7609	1	409	
6916	14967	A	761	85	379	KKPKTKKRTGPVRQNVWRGRSLSPGRA PAEGPQGGSTESPLL VGRCLILGLREPG VPPAA YGRFLRDYMNISIQGKLEKQRPQ* GLPSLTGAELIKH

6917	14968	A	7610	3	644	GDQRDLISNNEQLPMLG/ERPGAPESQRP AQPSRDTRPPLPSPKIASPMCSLKKG*KA ITPMLLPQSPKTPKP/VSKMRMATPLLM QALPM/DALPQGPMPQNATKY/GNMTED HVMHLL/TVLTKC/QEEVSHIPAVHPGSF RP/KCDENGNYLPLQCYGS/TGYCWCVF PNGTEVPNT/KSRGHHNCSAPSPSPISHLY LIP*DPGAWLFRHPGQDKPSRNSR
6918	14969	A	7611	1	1032	MHRRRSRSCREDQKPVMDQDRLISNN EQLPMLGRRPGAPESKCSRGALYTGFSIL VTLLLAGQATTAYFLYQQQGRDLKLT TSQNLQLENLRMKLPQASKPVSKMRM ATPLLMQALPMGALPQGPMPQNATKYG NMTEDHVMHLLQNAD\PLKVYPPLKGSF PENLRHLAKNTMETID\WKVFESWMHH WL\LFEMSQPLPCSKSPLDAPPKVLT QEEVSHIPAVHPGSF/RGPKCGRGTGNY LAIPVAYWGASATC\WCCLFPNG/TREVP NTRSRGHHNCSSESLGTWKDPSFLGLGV LTK\QDLGPVPIVRASRGGGLQHPASPTQL QLSCSLQPPAPPPSPTL
6919	14970	A	7612	59	321	LSGSPLVTATSQVPGLSRGKTGGPDPA/ SALPAPTSPISPPPPSRSSLRRPRAPSGCP WGCPGSLQQAPGPLHWQDYRPGVRVRL PG
6920	14971	A	7613	1	464	DEEDGENAHPYRNSDPVIGTHTEKVS ASDSMDSLYSGQSSSGITSCSDGTSNRD SFRLLDDGPYSGPYCDQATLHTDFTSP YDTSLSKI*KGDIIDICKTPMRMTGMV NNKVGNFQFIYVDVISDEEAAPMTIKAN RRSISILSKTLQ
6921	14972	A	7614	1	2119	LSFLDLNENDFLSNNIHTYQGKTLQGTS YQAIKSGSDPVESMGTLRQLKLVWTK KARVQNLDEVKPTLINLQDEDDTLISCL KLTKSREKKVNSVSTRRKEEMEIRLDTL SASLGRSSTLNNCNLEDKLAWYEGEAY MWHHWKPFENPLWTCLDFQIAQVGPW DHCSSCIRHTRLKSSCSDMDLLHSWVTL CRQESSNITCWTKLREKRGDLFCILFVCF IDRKTPRKFSDDQALEILKIGRKQKVHSL GVVRIQNAQEKAIQCFREGETSKTKEYE SVIKFYPKQRSSFGNFRFRNNSLSKPD DSTEAEHGDPTNGSGEQSKTSNKEAVW GKKMRAISWTMRKKWGKKYIKALSEE KDEEDGENAHPYRNSDPVIGTHTEKVS KASDSMDSLYSGQSSSGITSCSDGTSNR DSFRLLDDGPYSGPFCGRARVHTDFTPS PYDTSLSKIKVIGEQGLVTWKGDIIIC KTPMGMWTGMLNNKVGNFQFIYVDVIS EEEEAPKKIKANRRSNSKSKTLQEFLE RIHLQEYTSLLLNGYETLEDLKDIKESH LIELNIENPDDRRRLSAAENFLEEIIQE QENEPEPLSLSSDISLNKSQLDDCPRDSG CYISSGNSDNGKEDLESENLSDMMLTDP LQLSPQLPQRGAGNINRRKTGFSLGHGK LNKEQRKDKKRLIQGWEVAEELGPSAAF G
6922	14973	A	7615	3	452	
6923	14974	A	7616	1	475	PDSSGPHRLRENPPMVAVSCPTKTNVKG PPGGKVGAAHAQYGAALGRUFLSFPT TKTYFPHFDL\SHGSAQV*GATGKKVAD ALTNAVAHVDDMPNVAVRP*SDLHAHK LRVDPVNFKLLSHCLLG*PWAHLPRPS FTPCGGTSPLEQSSWASC
6924	14975	A	7617	26	461	WESCGPHQRTG*AGSSRCGWRRRAAGP GCHQPRAGVPGRTCAGRSPAADAAGR CWLGGPPPPGCGPRCLR*CAGHPPAGSA RVWVAVAGASTGLGRLWGRRWSPSCH RCQSPGCQAGRRGTARLSWPLSRRTSCR

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6925	14976	A	7618	3	419	LLDPSDGKSCGPTSKDCRRRIRQYSVEA LPRPALPHTRGSGRKEARGEGQSGAGA PADPDKLEAAVAVGEDVQQAPGCHQPR AGVPGRTCRAGRSPATRGTRDGT/QGR AGPATVPIPPGPWGGPTCRRCRTLLARR S
6926	14977	A	7619	2	227	AGVFCDAGLTFTSSSGQQTAAQRAELLC QPAALRRRSEPFVHLLDISGEYLLGTFY YCVENLRDGPCVVADAV
6927	14978	A	762	209	393	WAVYCTSFMLS*CYKI*CKPALSLLGI*T TEVKTYVYTNRCCMSTSAALLIVAKN*K HSCC
6928	14979	A	7620	11	394	SEFCDWVADLDVQKYEQPS/HEALTS MGSTEARVDYMGSSILMGIFSNADLKLQDE WKVNL YNTLDSSITDKSEIFVHGD LKWDFQVMISRSTTDLIKIGMKLQEFF TQQFDTSTRALSTWGPVPYL
6929	14980	A	7621	3	185	FFFFFFER/CPTLAQARVLWCLHSSPQ PQS PW/VSSNPAS/ASQAAGTAGMCH RAWLLKTEVGLD
6930	14981	A	7622	1543	1744	FVKSKALAFFLSFFFFFLKQSLSVTQAG VQWPVDSLQPLPPRFKRFSCLSLPSSWD YRCVPQCPAN
6931	14982	A	7623	1	259	SENQEQUEEVITVRVYDPRVQNEGS WNSYVDAYKIFLHTNSKAFTAKTSCV RRRYREFVWLRKQLQRYAGLVPVSEL PGMPTLYGLY
6932	14983	A	7624	3	265	CCHPRLACSGMILAYCQSRPLPGSK RFPCLSLPSSWDYKQPCHHTRIILVFL VETGFFHHVGTGLE/MLRNSGDPPTLA SQKCWDYKA
6933	14984	A	7625	2	375	RAALTPSTYKGAPSPK/GAPHSTGVT SASPKEAPTPPAVTPPSPEKGPATPA PKGTP TSPPVTPSSLKDSPTSPASV TCKMGATVPQASKGLPAKKGPTALKE VLVAPAPESTPIITAPTRKGPQ
6934	14985	A	7626	2	425	IFPPPKRGFFSKKKGVVFNPPASSSR FFARPPPGVGPPPVSSSSSSPFYFYA SSSSYSSSNFPS/HSSSSSSSSSSSPR QQHPLYPHCLGWAERAW/PPGTPLYH YKTQRKQGT SASPGRGTTCHTPQSP PLPGHHRCPW
6935	14986	A	7627	3	253	
6936	14987	A	7628	48	557	AGLGKARLAPGTPLYHYKTQRKQGT SASPGRGTTVTQRGHCYQNAPGRTLQ PPPCGQQTSGH*GPGWPYESQRLWK TPQRS*Q*FLHPPPR/HCHTPACGAAS APCVGRYCPRCSCAPARSASLAALTRE TAPLLSPSWAPGDPTLEGWPGNGSPL PPRGM*PHLYPHCRLGWAKRAWPRGH HCITIKPRGNKEQVQVRGEGPLSRKE VTVIKTLLVVHFSHHLAASKPAAIEGL DGLMSLRGYGKLHKDLDNDFCILLAL PHSCLRSSFCITMCRALLPEMLMCSC SLSISGRSDSGNSSSSSFSFLGSR RPHVGGGLAREWFTTPTGEDVTGI EDGL

6937	14988	B	7629	122	1028	MENGQSTAAKLGPLPTPEQQEALQKA KKYAMEQSIKSVLVKQTIHQQQQLTNL QMAAVTMGFGDPLSPLQSMQAQRQGA LAIMCRVYVGSIIYELGEDTIRQAFAPFG PIKSIDMSWDSVTMKHKGFVVEYEVPE AAQLALEQMNSVMLGGRNIKVGRPSNI GQAQPIIDQLAEEARAFNRIYVASVHQD LSDDDIKSVFEAFGKIKSCTLARDPTTGK HKGYGFIEYEKAQSSQDAVSSMNLFDLG GQYLRVGKAVTPPMPLLTPTPGGLPPA AAVAAAAATAKITAQEA VAGA AVLX*
6938	14989	A	763	348	638	VQGKPWGMGRAVCPAPGPVRLEERPVC GTPCLCLHPARMTPAWGSIHCLPSHGGC PCLPVNAPSWLQGPSPWARALLQ*WVV LGAEGHLPTLRITTVG
6939	14990	A	7630	3	407	KSMTEAEQQQLIDHFLFDKPVSPLLLA SGMARDWPDARGI/WIETLFKSKDYEFM WNPHLGYILTCPSNLGTGLRAGVHIKHE KFSEVLKRLRLQKRGTTGGVDTAAGGV FDVSNADRLGFSEVELVQMVVDGVN
6940	14991	A	7631	1	170	
6941	14992	A	7632	1	411	SYEVFKELFDPIISDRHGGYKPTDKHKTD LNPNLKGGDDLDPNYVLSSRVRTGRSIK GYTLPPHCSRGERRAVEKLSVEALNSLT GEFKGKYYPKSMTEKEQQQLIDHFLF DKPVSPLLLASGMARDWPDARGI
6942	14993	A	7633	2	1250	LPTDGAPPPPPGRPPAAAMPFSNSHNAL KLRFAEDEFPDLSAHNNHMAKVLTPEL YAE LRAKSTPSGFTLDDVIQTGVDPNGH PYIMTVGCVAGDEESYEVFKDLFDPIED RDGGYKPSDEHKTDLDPDNLQGGDDL PNYVLSSRVRTGRSIRGFCPLPHCSRGE GRAVEKLAVEALSSLDGDLAGRYAL KSMTEAEQQQLIDHFLFDKPVSPLLLG LGHGRRNWPDARGIWHNDNKTFVLVWV NEVEDHLRVISMQKGGNMKEVFTRFCT GLTQIETLFKSKDYEFMWNPFHWATSL PCHCNLGTGLRAIGLHINKLPNLGQGM KFSEVLKPAELSKSRPPGGVEHGLR WAGVFDVFQTLNRPGPSQSVELVQMV VDGVKLLIEMEQRLEQQQAIDDLHAW PKK
6943	14994	A	7634	1	175	EQLPYFVTFISMPATT/EGRRGFSLSVESA CSNYATTVQKVVNRMHISPRALGTLH HN
6944	14995	A	7635	1	83	
6945	14996	A	7636	61	2028	
6946	14997	A	7638	517	1038	NKRIYNCMMISSRRVISLSPVLLQIFDCP RLKFSEIPQRLTALLPPDPVINVHVEV APACFSDQGMISFLPSLPLPLPSLLPP CWICPSGALGPVWGHGHEGLDFPGSV DPDQKKTACYDIDVEVEEPLKQGMSSF LLSTANQQEISALDSKVGPKPRAVGH
6947	14998	A	7639	154	1594	LSRCRTLPSMTPLQHPPTVVQRPMP GARMPHQGRPWAPRAPRTWAAPCDPA WPRD GARPOASSAPARQSQAQSQGP EPTAPARSRAKRRKMADKILPQRIREL VESQAYMDLLAFERKLDQTIMRKGVDIQ EALKRPMKQKRKLRLYISNTFNPASDA EDSDGSIASWELRVEGKLLDDPSKQKRK FSSFFKSLVIELDKDLYGPDNHLVEWHR TPTTQETDGFQVKRPGDLSVRCATLLM LDYQPPQFKLDPRLARLLGLHTQSRSAIV QALWQYVKTNRLQDSDHKEVYTMGDK YFPQNFDCPRLKFT*IPQRVTAVLMPP DPVINVHVISVDPDQKKTACYDIDVEV EPIK/GGQMSSFLSTA/NNQQEISALDS KIHETIESIMQLKIQRDFMLSFLRRPHKL CARTWLRSQEPGTSR*LT DVAGNPEER

						RA\EFYHQ\PWSQEAVSRYFY\CKIQASA GKEAW
6948	14999	A	764	746	1280	ISHMELQFGAIFAEILFRGPFHHLHNINFT WASCCPHASQPGRQRGSSWNEYHSFRE FNQEKEKIWRAGESAPLPLAGAAACPV RGGASNPICTVGASAAGGRAGGSGEET GSAPGAACSST*ESYEAFSGFSSSPGNSV *TFSTSSTYTASPPTSPSPSVSPSPCYYS SSSSL
6949	15000	A	7640	256	426	HPICPQTTKAFLPRMLELQNGHIVCLNSV LALSAIPGAIDYCTSEAADFGMESLT
6950	15001	A	7641	1	985	RIARPGEFRPLPGSAARRMAWKRLGALV MFPLQMIYLVVKAAGVLVPAKLRLDLS RENVLITGGGRGIGRQLAREFAERGARKI VL\WGRTEKCLKETTEIRQMGTECHYF ICDVGNRDIEVYQTAKAAREKVGDITILV K\NAAVV/HMGKSLMD\SDDDAFLKAQ\ NINTLG\QFWNHQGPFGKLCWKQQNGP H/LVCLQLPLLGI\LA/LPGAIDY\CTSKA SAFAFMESLDPG/VLAGTCPGVASATTVL ALSTTSTEMFQGH*EFRFPNLFPLKVPET VARK/TQVEAVQLNQALLLPWTMHAL VILKSILPQAALIEIHKILKETYNLE
6951	15002	A	7642	1	376	KQAASNQDLSLMGLG/DSHPVEERGHILC EFCGVQLFYDVLVHYQDQWDLRPGTAF FRVTEGIPRLHSQAQETWPEL/PLRRVRR QENLSSGYLDDTLLETANGPTFCLPARPF NNMTATYNQLSRS
6952	15003	A	7643	1	2753	MKEFSSTAQGNTEVIHTGTLQRHERHHI GDFCFQEMEKDIHDFEFQWKEDERN SHE APMTEIKQLTGSTNRHDQRHAGNKPIKD QLGSSFHSHLPPELHMFQTEGKIGNQVEK SINSASLVSTQRISCRPKTHISKNYGNNF LNSSLLTQKQEVHMRKESFQCNEGKAF NYSSVLRKHQIIHLGAKQYKCDVCGKVF NQKRYLACHRRCHTGKKPYKCND CGKT FSQELTLTCHRLHTGEKHYKCSECGKT FS
6953	15004	A	7644	1	149	DSFGASRFLRIHAETFTLRAFYAESRCI EALDELASLQVTMHQAQKHT
6954	15005	A	7645	81	331	KGARFLLLILYLLDAFLFNLDLFFLEYPS YFLLCFCSLLFFCHCFSLYFFVCRPSSS LFSSSILLILLFVLVRFLFLCLFL
6955	15006	A	7646	701	1114	ATRHSMLSCHYTYIYIKHTHTHVFIYIT YTYIHTHIYTYIYIYIYIYIYIYIYIYI FFFFFFFFFETESRSVTQAGVQWHDLSLQ AASWGHA/DSPASTSQAAGTTGAHHHA Q/LIFFFVFLVETGPHRASQDS
6956	15007	A	7647	1	207	RSVFRERGLSAG/SLVERLYRVRFRDRF ERILKMARKAVETHVLRSPHLVSDYRDS IIPSESLALPC
6957	15008	C	7648	244	432	
6958	15009	A	7649	898	1144	IFQLLLMEGPANIIGNTGSSNTGRSNTGP SNQSSYLISFLFLCFFETESRSGRPLGV QWAWISGSLQALPPGSTPFSCLS

6959	15010	A	765	1	493	KGPVSKEPRSGMNRNSALRVNVRPLRPC PQEGGLPLQSCVPPLGLCRVPSRGKQPK HLLPTG**AIAGLPNLHVIDFIPLKLSFGL* GVPQGPPLGRGPQSQGS�VTQAPMGG GPRKGLPIDRCE*GACTLGPWAAPVPLS SKGPFPTVGPRLSDSFSAR
6960	15011	A	7650	1	476	ATRELVTSSGLRRKTGLWARPKEKPTA WHLASLSRPDELVRNPQEPQGPREEGS LGHVARTPAPGGGGQRHLSRAGHSRPG RRFKATLWLSEEHPLSLGDQVTPIDLM AISNAHFAKLRFITLRLPPGFVPVKIEPL FHVNLARIHLSGNLCGC
6961	15012	A	7651	1	1071	
6962	15013	A	7652	2	240	SCSIGSFQFG/YYPGVINAPETIIKKFINK/S LTAKANAPPSEVLLTNLWSLSVAIFSRRG YESASLFPSGLFVNRFQVLT
6963	15014	A	7653	2	391	QTGRGMWCSLVFLLLPATPRKQSEPK TTDAAAPGTADTAGPGTMDTAVPRKAE TAVPGKRNTAVPGTADPASPGTADTAEP MRTTPTVLASWPSLTQSTKAPSRLLP APSPGSCSATSTSCSRSP
6964	15015	A	7654	1	200	
6965	15016	A	7655	3	416	CLFPVQLLLDHGADPNQORDGLGNTPLHL AACTNHVPVITTLRGGSGFFPSLSSFSF SPPECSPQLVPAGARVDALDRAGRTPLH LAESKLNILLEGHAQCLEAVRLEEKHHH MLKEHLELLGRHYQLINAWMTLD
6966	15017	A	7656	1	395	KVQSRCSSKENILRASHSAVDITKVARR PRMASFALTSMDFKITVLEMPVLGTE IINYRYGMARGLVQYVVSDDIVFSFLFSL LYEYFIRSFHFSLSLFIYLSLRSFFKLRESF FCFSSIFLSSTFALS
6967	15018	A	7657	210	441	LNPILYSPGRDHRVQNFHLPRLCIQKLP KSKCFIYELPAHRKKLVQLEPLTDDELE PDFVRQVTESMSYIFSHSMI
6968	15019	A	7658	8	399	RVGVAGPAPWWLRVSLGGRDFHTPISV TKVAERGKAEDADLRPGDIIVANGESAE GMLHAEAQSKIRQSPSLRLQLDRSQAT SPGQTNGDSSLEVLATRFQGSVRTYTES QSSLRSSYSSPTSLSSRA
6969	15020	A	7659	2	260	WEPPWPGPVLGLPLPPLPPSPSSLPPIPP PRGCSLGASSA/WTAVVSSPKEPVRPQE PPPGGEGSNENHRRKWHPPFSVMLKSCY
6970	15021	C	766	82	201	MKSKHFINLISRQHKNYNLIYTFIRSRDF KTAIFLSILS*
6971	15022	A	7660	2	442	PRVRVYYYFRQGHEAYVEMARKNKIYSI NPKKQPWHKMELREQELMKIVGIKYEY GLPTLCCCLKLAFLDPDTGKLTGGSFTMK YHDMPPDVIDFLVLRQQFDDAKYRRWNI GKGE/CSDRFRSVIDDAWWFGTIESQEPL QLEYPDLSLQ
6972	15023	A	7661	965	1232	TGVQWPDLSLQPLPPEFKQFCSLSLR GWDCRRPLQLADFCIFSRDGGYCYVG QAGLKLLTSN/DLPASASQSAGITGVSLC TQPKSS
6973	15024	B	7662	111	374	MVAAATGSEILLWALQAEGGGSEIGDSG NWIEIAYGTSLGVRVIVQHPETVGSFP QLLQTFVHRSPVTKIMLWEKHLISVCA DNNH*
6974	15025	A	7663	387	545	

6975	15026	B	7664	181	4716	MGRPAPAVPRPARPATPPAWTAALPAG RPRGDPGFRAFLCPLICHNGGVCVKPDR CLCPPDFAGKFCQLHSSGARPPAPAIPGL TRSVYTMPLANHRDDEHGVASMSVSVHV EHPQEASVVVHQVERVSGPWEEADAEA VARAEAAARAEAAAPYTVLAQSAPRED GYSDASGFGYCFRELRGGECASPLPGLR TQEVCCRGAGLAWGVHDCQLCSERLGN SERVSAPDGPCPTGFERVNGSCEDVDEC ATGGRCQ
6976	15027	A	7665	209	1288	EEKNERRDRDTERKGEARTSKTSQKRET KETTGGKTKQKRKKEKTTDKTKRKKR TSKTEENKKRKQEKEDRERDESTKRRKE GERERRGNARRRKKGGEHKKRGERRN NSKGEGEEERGRKTKAKTRRTRQATNT DSKNEKGRKGKGQTRARRPAETGRRRR KRKRQRKAGETTPGETGRWCASVRSVD GSPTTAFTVLECEGSRRLGSRPRRYLLN CQANGSLAMWDLTTA\MDGFGQAPAGG LTEQELMEQLEHCELAPP/R/CASSSLNG AVSPSPSPRISLT/NASTQASSNTSFVWPT VGSPKPPARLKARRRGWGEALWKAAR NWCVGVGQTSDGHPHQAPWPSKRSRHSP HTFQE
6977	15028	A	7666	3	1703	GGRRAAALGVAIGAAGAARAAAWTGP ARRASPRALHPGRVRPALRPWADRLPLY PDLRAPQRHQRGQRRSRGGPGGTRLPR LVPSEAAEPAQPSGASAAARRTAQPLSDG ATRCPTLAMHGCWAECWMRKPLPHPQ VRFYLVGQPEEPMVRLVCGHHNWIA VAYTQFLVCYRLKEASGWQLVFSSPRLD WPIERLALHARVHGGALGEHDKMVAA ATGSEILLWALQAEGGGSEIGVFHLGVP VEALFFVGNQLIATSHTRIGVWNAVTK HWQVQEVQPITSYDAAGSFLLLGCNNGS IYYVDVQKFPLRMKDNDLLVSELYRDP AEDGVTALSVYLTPKTSDSGNWIEIAYG TSSGGVRVIVQHPETVSGSPQLFQTFV HRSPVTKIMLSEKHLISVCADNNHVRT WSVTRFRGMISTQPGSTPLASFKILALES ADGHGGCSAGNDIGPYGERDDQQVFIQ KVVPASQLFVRLSSTGQRVCSVRSVDG SPTTAFTVLECEGSRRLGSRPRRYLLTGQ ANGSLAMWDLTTAMDGLGR/SPAGGLT EQELMEQLEHCELAP
6978	15029	A	7667	8	566	TLVTVGNSQGREGLAFLVSCPEGRADCA SESACSSDSLDEARSSGSEGTADTGDLS PGHGASAPSVSREARQTVPLTVRLHTQ SVSECITEDGRTVAVGDIVWGHRR*GRT CWPGASDLCSTL*AFWPAACRAHWAR WSAWCEVPRGPAVCSGRGWT*AQRLLP LSVFVPTTQRMALAHEAV
6979	15030	A	7668	2	610	SPEILVDPRLRPRVRLAFLVSCLVGRADC ASESACSSDSLDEARSSGSEGTADTGDLS SPGHGASAPSVSREARQTVPLTVRLHT QSVSECITEDGRTVAVGDIVWGKIHFPP WWPARVLDISL/WPEGGRRAVLAR\RKV SWIGSPTTSFLSISKLSPFSEFFKLRFNRK KKGMYRKAITEAANAARHVAPEIRELLT QFET
6980	15031	A	7669	3	392	ADAAVPTRCVTSGHSLPISGHAAESELFH R/P/AGIILPSRRNVLPARGASSTRRARPLE RPATVPVPVAPSSRAARSRHIDPLLQSSPT PPGPTGSAAAYVAVPTPNSSSGPAGRPA GAMLYHSWVSEITE
6981	15032	A	767	88	372	QGMSKRRGVKLNDDGQFMPVLGFGTY APS*VPRSKALEVTKLAIEPGFRRIDSGH LYTNEEQAGLAILNMIADGCVKREDIFY TSELWATFY*PE

6982	15033	A	7670	5	393	GFRNPPRDSHHPHSTRRRRAFLRRWEKD PGRGKGRAPEPAQQRDASPPTRRPLEGP/ PREHLRQWERLPFPKSPWKEVFAFVSAN KACSALSGPVAPVETAAEPSPPS/PRVRG RSGPRTKGARPRNRCCDD
6983	15034	A	7671	2	399	ARTNTGGRPYCFIRMSNLIHRTQQGYN NPRPLSTNIILSDIQTETKLRPPYQISMCE LGSAGVTSAFSADCKGAEKISSGHQRL EPATLSGIAFGILSLWLGALNLIPGFHAI QRLLOREGDDFNSFIALF
6984	15035	C	7672	151	339	MSTFPIHISPKLRGDDVRGRXLXWRWPL RGFCATVRWCPPGAAGWCAXPVRAESA FXRPAKS*
6985	15036	A	7673	19	443	SVRWNSCRAEAPQWPAPAAAPAAHSPH LSLGESGLGKLILNSLFLTDLYSPEYGP SRIKKPVQVYILVFLIDDKLE*Y*YTQST CCNFHYASQSWQPAINYIDSKFEDYLN ESRVNRCQMPGNRVQGCIFYIAPSGH
6986	15037	A	7674	152	532	QALRANRPAPVAEGATDRTVAQKLLNG QRQLQRPPTRLI*AWVEQSKVLIKIDGG VQLLLTIVDTPRFGDAVDNSNCWQPVIN YIDIKFEDYLNESRVNRCQMPGNRVQ* *LYFIAPSGHGPHLN
6987	15038	A	7675	1	627	GSARSAAEERSVNSSTMVAQQKNLEG YVGFANLPNQVYRKS VKRGFEFTLMVV GESGLGKSTLINSFLTDLYSPEYGP RIKKTVQVEQCGVLIKEGGVHLLLTIVD TPGFDAVDMSNCWQPVYIDYIDSKFE DYLNESRVTRRQMPDNRVQCCLYFIA PSGHGLKPLDIEFMKRLHEKVNIPLIAK ADTLTPEECQQFK
6988	15039	A	7676	2	371	VLELEERALLREARLGRARSSGGMQATP ATEGLARPQAPSSAFRCPCYCKGKFRS AERERHLHLHRPWKCGLC SFGSSQEEE LLHHTCQVCGQSFTQSWFLKGHMRKH KASFDHACPVCGR
6989	15040	A	7677	44	983	RGSMEGSRPRAPSGHLAPSPPAFDGELD LQRYSNPVAVSAGSLGMGAVSWSESRA GERRFPCPVCGKRFRFNSILALHLRAHPG AQAFQCPHCGHRAAQRALLRSHLRTHQ PERPRSPAARLLELEERALLREAPTGES PKLRGHAGHPLPLMVW/PRQAPSSSAF RCPYCKGKFRTRLERERHLHLHRPWK CGLCSFGSSQEEELLHSLTAHGAPERPL AATSVAPPPQPPQPPQPEPRSVQPEP EPEPEREATPTAPAAPEEPPAPEFRQC VCGQSFTQSWFLKGHMRKHKASFDHA CPVCGR
6990	15041	A	7678	1	582	GNAGLSSLTEGVLDLFAVKAVYMGHPGI DIHTVCVQNKLGSMFLSETGVTLTYGLQ TTDNRLHVFAPKHTAKMLFSGLLELTR AVRKMRKFPDQRQWLRKQYVSLYQE DGRYEGPTLAHAVELFGRRWSARNPS PGTSAKNAEKPMMQRNNTLGISTTKKKK KILMRGESGEVTDDEMATRKAKMHKEC R
6991	15042	A	7679	2	428	SVGSESDSSKEGPSMTRSGPLRRSRAVP G/PEESQGNLTVIRVVIHDLQOTKCIRFNP DATVWVAKQRILCTLTQSLKDVLYNGL FQPASNGRDGKFLDEERLLREYPQPVGE GVPSLEFRYKKRVYKQASLDEKQLAKL HTK
6992	15043	A	768	177	311	WFQNPCYYLFFLETESLSPRLERSGTVS AHCSL*LPSSSDSPAS
6993	15044	A	7680	1	248	VIFLVNSGSEANELAMLARAHSNNIDII SF/RTMCPDVFRGPWGGSHCRDSPVQTIR KCSCAPGPTGQGGCQWSVGSWKGHE
6994	15045	A	7681	1	501	

6995	15046	C	7682	60	380	
6996	15047	A	7683	3	649	LSPSYFHSISFPHSLFLPLEGTVTRNRELW GLLQAMGVHHSRIPLLAPPHNLKVQQ DSEQLEPGLQSASMGVGFSLGRNDSNLE TFAETLVPGSIPLPGILEMHPFLSLGTSRT SVTKLSLHIKPRMPPCDFMPERYQVIFLV NSGSEANEELAML MARAHNNIDNISFR GAYHGCSPYTLGLTNVGTYKMKLPGG TGCQPVSLFLLFL
6997	15048	A	7684	27	211	FHIVQYFNFFVCLFVCLFETESTLSPRLEG SGVISAHCNLTLPFGFNNSCASASRVAG TTQ
6998	15049	A	7685	1	310	RPRRRGDHREVKGGRGKGGEGRPQGG QRWAVGKGGEGRPQGGQRWAVGKGGE GRPQGGQRWAEKGKGGEGRPQGGQRWQ WGKGGEGRPQGGGERGPGGKGGE
6999	15050	A	7686	2	320	KYVFTDISYSIPHRERFIVVREPSGTLRKA SWEERDRMIQVYFPKEGRKILPIIFKEE NLRFEPDSTEYIKVHHKTYEDIGRKGKAY DLLRSTRYFGWEVWVFC
7000	15051	A	7687	22	1071	GVLRAWNGSVSGLESSPGTVACSNRYL ALSRWGCHSRRINSYGAESGPETKKPT FMDEEVQVRVLTGMTGLNLQKTFKPAIQ ELKPPTYKLMTQAQLEEATQAVEAAK VRLKMPVLEERVPIINDVLAGDKDFWK GTETTKYVFTDISYCIPHRERFIVVREPS GTLRKASLAEDRDRMIQVYFPKEGRKILP PIIFKEENLRTMYSQDRHVDVNLCAQ FEPDSTEYIKVHHKTYEDIDRKGKIDLL RSTRYFGEMVWYFVNNKKIDGLLIDQIQ RDLIDDATNLVQLYHVLHPDGQSAQGA KDQAAEGINLIKVFAKTEAQKAYIELT LQTYQEALSRHSAAS
7001	15052	A	7688	2	383	FSAPAASEPLPFGSGPPPSEPLPFGSGPPSPD LAFAPPPSEPLTFSGPPPSEPLTFSGPPP SDPLCFTAPPPSEPVPFSGPAPSDRLPFFG PTTSEPPNR/PGMPTQHPICLSKNTPLPE PTRLHP
7002	15053	A	7689	3	2484	PAIKIRRRVRDLQDPPQMAPEIQPPSH HFSPEQRALLYEDTLVTLHRLGHPEPN HVTEASELLRYLQEAHFHVEPEEHQQTLO RVRELEKPIFKLKVQAKGILGKDVS GFSDPYCLLGIEQGVGVPGSGPSRHRQ KAVVRHTIPEEETHRTQVITQTLNPVWD ETFILEFEDITNASFHLDMWDLTVESVR QKLGETDLHGLRRIFKEARKDKGQDDF LGNVVLRLQDLRCREDQWYPLEPRTES YPDRGQGHQGLVHKRRATSASRSQP SYTVHLHLLQQLVSHEVTQHEAGTS/W GRVAESQAATVFLHATQKDLSDFHQS MAQWVAYSRLYQSLEFPSSCLLHPITSIE YQWIQGRLKAEQEEAASFSSLLTYGL SLIRFRSVFPLSVSDSPARLQSLRLV QMCKMKAFGELCPNTAPLPQLVTEALQ TGTTEWFHLKQHHQPMVQGIPEAGKA LLGLVQDVIGDLHQCQRTWDKIFHNELI SSTLKIHLFSMAFREQLWLVAKRVDHT TVVGDVVSPMGESLFQLYISLKELCQL RMSSSERDGVLDNFHRWFQPAIPSWL QKTYNEALARVQRAVQMDLVPALGELT KHSTSAVDLSTGFAQISHTARQLDWPDP EEAFMITVKFVEDTCRLALVYCSLIKAR ARELFFRARRTKARAANMLCVVNDME QLRLVIGKLPAQLAWEAQRVGAVLE QGQLQNTLHAQLSGALAGLGHEIRTG VRTLAEQLEVGIKHIQKLVGVRESVLP EDAILPLMKFLEVELCYMNTNLVQENFS SLLTLLWTHLTLVLEAA

7003	15054	A	769	193	363	IPALSTGNGLTLLFFF*DRVSLLSPTLECS GVISAHCNLCPLPGSSYSAAALASQVAGI
7004	15055	A	7690	31	510	GDHASDKETITIVNIYAPNIRACSKYIKQT LTELKGEVDSNVITAISILRFQQLPTLIKT ESLRNRNSSSSSSSSSS/PSSSSSSSLKKS LP TKESIGPDGFTDEFYQTFKEELK/PKSSSS SSSSSSSSSSSSSSSSSSSSSSPEKDATRE ENYRPISL
7005	15056	A	7691	2	189	TYHIDRIKDKSHMIISIA TEKAFDKIEHPF MIKALSQLEVVGMTNVIKAIYKKS MANI TQQ
7006	15057	A	7692	3	409	NTANRAARVSASIEDSPDNSETLPDES F RNGENAKRFAIDIGGTLTKLAYYSTVQH KVAKGRAFDHSGK DTERDTSRPMRVQF KKRALLDGTSLRRRKPTPKPAWTSSKTIS STQRP/EVIQATGGGAYKVKDLI
7007	15058	A	7693	88	480	KEELYGDFEDLET/G/DVHKGKSGPDTQN EDIEK/QDEIDPDEKKS AKKKHLDKKRKL KEMLD AEYDEGESTYFDDLKGEMQKEA QMRLKNHRWYKKILKSQDPIIFSVGWRR VHTILLYYIEDHNGRQRLKY
7008	15059	A	7694	1	1068	MAANRKDFIHRRCGP ELSQSEAVPQGLC RAERSSALAMLSGSVPRRTQLRPCKGTQ RRCRRGGEADSGGEAVGGGAAERRSAA ARRRGORRRGGGEAVGGGAAERRSAA ARRRRGRRRRGGGEAGGGGAAEARR AAAAARRAAAAARRAAAAARRAA AARRIAESGGEAHSRGEAHS GGEAHS GG AGAERRRRLHSPALKTHPGQSSEGHVE YKLNHVEFEDQDDEARVQYEGFRPGMY VRVEIENVPCFVQNFDP LYPILGGLGN SEGNVGHVQMRLKKHLWYKKILKSQD PFISSVGRRFQTIPLYYIEDHNGRQRL KYTPQHMHCGAAFWGKI*LQ*LAYCRD
7009	15060	A	7695	66	844	KEELYGDFEDLETGDVHKGKSGPDTQN EDVEKKEEIDPDEEESAKKKHLDKKRK LKEMFDVEYDEGESTYFDDLKGEMQKQ AQITAYRFSPTTSC TLNHA EFEDQDDE ARVQYEGFRPGMYVCVEIENVPCFV*N FDPRYPILGGLGNSEGNVGYVQVG PFA AYLVPEALWISPPSIILPSHPPQMRLKKH RWYKKILKS RDPPIIFSVGWRRFQTIPLCYI EDHNGRQRLKYTPQHVHRG/AAFWDKI CLQ*LAYC
7010	15061	A	7696	1	1177	LRMLGTRSALWACRGWGQQHMHAW LTEQPLGVLFP EELYGDFEDLETGDVHK GKSGPDTQNEDIEKEVKEEIDPDEEESA KKKHLDKKRKLKEMFDAEYDEGESTYF DDLKGEMQKKAQLNHVEFEDQDDEAR VQYEGFRPGMYVRIE IENVPCFVQNF PHYPIILGGLGNSEGNVGYVQMRLKKHR WYKKILKS RDPPIIFSVGWRRFHTIPLYYIE DHNGRQRLKYTPQHMHCGAAFWGPIT PQGTGFLAIQSVSGIMPD FRVAATGVVL DLDKSIKIVKKLKL TGFPYKIFKNTSFIK MFNSALEVAKFEGAVIRTVSGIRGQIKK ALRAPEGVFRASFEDKLLMSDIVLMRLS TCSIPA/FY/NPVTSC*TIGEKHLVRMRPR P
7011	15062	A	7697	163	371	KGTTKL VVKLSDFKSYFKAIVIKTVRN/W HKYK/HIDQWNRIQNPEINPHIYGQMIFK KRAKNQWKKDGL

7012	15063	A	7698	270	1479	PGCAFSSSGTSRQLAPVLGYLGSRQKHS LPDLPYDYGALEPHINAQIMQLHHSKHH AAAYVNNLNVTEEKYQEALAKGRFQAER EKNVVCTFNF*GDVTAQIALQPALKFNG GGHINHSIFWTNLSPNGGGEPKGWIYCA PLSTTSCTVGIDVISWAL*QKIF*IHVI*HF TVIIGNLFCGWFWDFFFNRLELEAIKRD FGSFDKFKEKLTAAASVGVQSGWGWL FNKQRGHLQIAACPNDPLQGTGTGYI*IG LSVVPVWKTSPLLKNVDSKVKGKRTVY QGDGHYVNHHPNQVFWGRGAVKALNR NLKGAPDLELDGESRANCGEKGREESER SGR*AWQLCSVGTGAPFFLTGLIPLLGIDV WEHAYYLQYKNVRPDYKAIWNVINW ENVTERYMACKK
7013	15064	A	7699	94	330	KSRSYKKMCLHFNFSGDVTAQIALQPAL KFNGGGHINHSIFWTNLSPNGGGEPKG WYILVHPYLHFVHSRNRLLIYWR
7014	15065	C	77	183	350	MYGLPGFFYAHXXXXXXXRXR HAPALRVNRSHTGGRVALPQPWL MV*
7015	15066	A	770	260	360	SPN*SPNVIFDS*DSPEKTAATVRGDFYV TGDRGMMD
7016	15067	A	7700	33	807	GPRAAQERHSWLWWLRLQIQIGGISG STSTSSMLSRVCGTSRQLAPVLGYLGS RQKHS/APDLPYDYGALEPHINAHIMHLH HSKHHAAYVNNLNVTEEKYHEALARG DVTALQIALQALAKFNGGGHINHSIFWTN LSPNGGGEPKG/EELLEAIKRDGFSFDK FKLEKLTAAASVGVQSGWGWLGFNKER GHLQIAACPNDPLQGTGTGLIPLLGIDV WEHAYYLQYKNVRPDYKAIWNVINW ENVTERYMACKK
7017	15068	A	7701	2	436	SGRGASLRPGVRPPSVSWEPYSGPGSTPP PPSSRSKDVGKPAQSWVRGGSTQPTNGQ LPKEGLSTPHVPVPRAGIPSSRQALLSSGN PGTRAPSAPALRPEAQASPAEFPAGAP/SPE LGGERLGGARFQEPQPAASFPGAAAT QA
7018	15069	A	7702	1	389	PGSSRQRCWHQPCFACQACQALINLIY FYHDGQLYCGRHHAELLRPRCPACDQLI FSWRCTEAEQQRWHENHFCCQDCAGPL GGGRYALPGGSPCCPSCFENRYS DAGSS WAGALEGDAFLGE/HWKVTHSLGRIDS TN
7019	15070	A	7703	1	1217	MGGHLANVPTGTSLQQTGLMEKHFTSG KQLLKTLONNIPQTTERTHNGWHQAWL LVFSCVRSFYVAALFAVGLGCGIHWFC AVFSVCAGHSTAVVSLPGSQHLSANM FVALHSYSAHGPDELDLQKGEVVRVLG KCQDGLRGVSLVTGRVGIFPNYVIPI FSTPSQLSGCREVGPTLVKPVVHKMGVY GWEEGSISEGDHKGAVPSNPS/VVPTAIV NPVRSTAGPGTLGQGSRLKGRSSMRKN GSLQRPLQSGIPTLVVGSLLRSPT/MGPS ASAVPILPATGDPLPLSRGGGDGVQA/S PSRGSPSRASAGAVRPGSTPRPAPSLWK TKKSPSRVS/LLPKPPASAPPILVKPENS RNGIEKQ/DQNREISEIQALLPPNITLPYPT SGKPEQPSLPQCVPA
7020	15071	A	7704	27	211	FHIVQYFNFFVCLFVCLFETESTLSPRLEG SGVISAHCNLATLPPGFNNSCASASRVAG TTQ
7021	15072	A	7705	27	211	FHIVQYFNFFVCLFVCLFETESTLSPRLEG SGVISAHCNLATLPPGFNNSCASASRVAG TTQ

7022	15073	A	7706	1	514	LSQSEKNNYYSSRFSPPDSQYIDNRSVNSD RASQ/ARERAPRLNHPPEQIDSHSRPLHS AHPGKPPSAPASAPQNVFSTTVSSGYNT KKIGKRLNIQLKKGTEGLGFSITSRDVTI GGSAPIYVKNILPRGAAIQDGRKAGDR LIEVNGVDLVGKSQEEVVSLLRSTKME G
7023	15074	A	7707	65	515	DPRVRAAGILYEFTWNQFCDWYLELTGP VMNGGTEAKLRGTRHTLVTVLEGLRL AHPIPFITETIWQRVKVLCGITADTIMLQ PFPQYDASQVDEAALADTEWLKQAIWA VRNIRAEMNIAPGKPLELLVAG\CTRNPN TSVNENRGFL
7024	15075	A	7708	2	505	EPVKKIFNYIIHVFNRNIMDFKLFLVFVAG VFLFFYARTLSQSPTFYSSSGTVLGVL TLVFVLLVKRFIPKYSTFRALMVGCWF ASVYIVCQLMEDLKWLRYDNRIYVLGY VLIVGFFSFVVCYKHGPLADDRSRLLM WMLRLLSLVLVYAGVAVPQFAYAAIIL
7025	15076	A	7709	2	417	EPVKKIFNYMIHVNRRNIMDFKLFLVFVA GVFLFFYARTLSQSPTFYSSSGTVLGVL MTLVFVLLVKRFIPKYSTFWALMVGC WFASVYIVCQLMEDLKWLWYENRIYVL SYVLIVGFFSFVVGTSMGPLADDKSRNL
7026	15077	A	771	80	357	GPFFFFGDRVLLCHPRLECSGMITAHCS LKLLCSQ*PSHNSLLNSWEHRHMPPLA KFFFHQQTKL*KK*NKNRSLESAPLSVFI KKVTTT
7027	15078	A	7710	14	426	RPIRMAVKQKISMLCHVNPEQVICHVDS STYRVPVLEEQSIKVFKERLHLPIGDS ASNLLFKWRNMADRYERLQKICSIALV GKYTKLRDCYASVFKALEHSALAINHKL NLMYIDSIDLEKITETEDPVKFHE
7028	15079	A	7711	61	204	GRYAYVWHCPQGPGLTPLVADTSGA YFRREGLSNYLGGRSPTEVS
7029	15080	C	7712	537	710	MCHHTQPIFVFVEMRFYVVGQAGLEV LTSGDPPVSAAQSTGITGLSHRAQPSSVR F*
7030	15081	A	7713	788	894	KHG\WLGTVAHTCNPSTLGGQGGWIMR SGVQDQPGQ
7031	15082	A	7714	1	452	SPVPQLIVPTVLSVVLLEPFLGAPLPANR LWTHLWAPRAWKQSPWQAPGLGRPLPS SLGIGSCGAPGAYTRPDRLHDKACPAE HGGGRGPGEAASRPLTAPSPGGCPEGL GTTSPQSRRTASSGGSYRSFTDPPPPPIC HHRRFFTL
7032	15083	A	7715	48	421	DLQSSQGGQQRVQSWSPGRGIPQLPC AKALYNYEGKEPGDLKFSKGDIIILRTQV DENWYHGEVNGIHGFFPTNFVQIIKPLP QPPPQCKALYDFEGKDKEADKDCLPFA KDDVLTVIRRD
7033	15084	A	7716	2	492	LTLNNTITPSLARGNFYPLEGGRVLLDGK PISAYDHKYLHRVISLVSQEPVLFARSIT DNISYGLPTVPFEMVVEAAQKANAHGFI MELQDGYSTETGEKGAQLSGGQKQORVA MARALVRNPPVLILDEATNALDADSRDL IQHALS\GNLRKHRDFLSPPVWP
7034	15085	A	7717	2	721	EGKVEEPENPAAKEKEGKEEEEETDGS GKESKQECEAEASSVKNELKGVEVGAN TGSKSISEKGSEE\VKRKSWMNTNKSEES SQPEAGAVSRGKNFDEESNASMSTARDE TRDGFYMEDGDPSVAQLLHERTFAFSF WPKDRVMINRLDNICEAVLKGKW\WPVN RRQMFDQGLIPGYTPTTVDSPLQKRSF AELSMVGQASISGSEDITSPQLSKEDAL NLSVPRQRRRRRRKIGN

7035	15086	A	7718	111	381	DRGLASFAQGLEVQWHNLSLQSPVPV LRRF/SPCLGLPRGCDYRPVPPHQANFCI VSRDGFYHVGQAGLELLTSSDPPTSQSQ SAGITGV
7036	15087	A	7719	1	190	ENKEEGQLPSSFYEASIIITLKPDKDSTK KS/SYRPT/SLMNFDAKUFNKMFMTNRIQQ YIERIIH
7037	15088	A	772	80	357	GPFFFFFGDRVLLCHPRLECSGMITAHCS LKLLCSQ*PSHNSLLNSWEHRHMPPLA KFFFHQQTKL*KK*NKNRSLESAPLSVFI KKVTTT
7038	15089	A	7720	1	2499	MAAAVAAPLAAGGEEAAATTSVPGSPG LPGRRSAERALEDATGTLNLSNRRLK HFPRGAARSYDLSITQADLSNRNRFPEVP EAACQLVSLEGLSYHNCRLCLNPALGN LTALTYLNSRNLQSLPPYICQLPLRVLI VSNKLGALPPDIGTLGSLRQLDVSSNEL QSLPSELCLSSRLDLNVRNQLSTLPEE LGDPLVRLDFSCNRVSRIPVSFCLRH QVILLDSNPLQSPPAQVCLKGKLHIFKYL STEAGQSGALGDLAPSRPPSFSPCAED LFPGHRYDGGDLSGFHSVDSGSKRWG NESTDEFSELSFRISLAREPRGPRERKED GSADGDPVQIDFIDSHVPGEDEERTVEE QRPELSPGAGDRERAPNSRREEPAGEE RRRPDTLQLWQERERRQQQSGAWGAP RKDSLLKPLRAVVGAAAVSTQAMHN GSPKSSASQAGGCSGAGSPAPAPASQEP LPIAGPATEPAPRPLGSIQRPNSFLRSSH QSGSGPSSPDSVLRPRRYPOVPDEKDL TQLRQVLESRLQRPLPEDLAELASGVIL CQLANQLRPRSVFHVPSPAVPKLSALK ARKNVESFLEACRKMGPVEADLCSPSDL LQGTARGRLTALEAVKRVGGKALPPLW PPSGLGGFVVVYVVLMLLLYVTTYTRLLD PRSPQVAWEVAPSRMTPLAPWDPKYE KAGPRPVVWSWGQTCGTGWAQGA WPEAPVLCPPHPRGPTVAQEPRSQAGRC VTPHSGRCMKQPRAGVSGPWLPQGTG MDSRRPQMQGSRWCAVKMSSRTLCCP GGSVFPCTCPRPPSR
7039	15090	A	7721	1	647	RPPVPVQVPDKDLMTQLRRVLESRLQR VLPEDLAELASGVILCQLANQLRPRSV PFIHVPSPAVPKLSALKARKNVESFLEAC RKMGPVEESLCQPHHILEEEGAPGRGLR LIIAAVVQRPAGPALGVKVGAAQGP PREQKTRLGSALSEKHVVVRVAWA GLPRLAASGVEGLGGRTCGCRRCRVSR NKQKPEALWKRGCCKIKKKL
7040	15091	A	7722	3	450	SRLVQRGGIPLGGWRMGVRRRTGQVGP TMHPPVSGASP/PPPPPPPPPHHHPHL LRTSCVPSGLYAQSSSSSSSSSSSSSS SSSSSSSSQLNKLKFKQVSPNSPTLSSSF SFLPFFPASSLTRQFFIECLPGAGMSQVL GK
7041	15092	A	7728	3	368	LLGQAVKYGVNPGPYGGTTARKLYEKK LLRLREQGPESRCSTPVPTISSAENARQ NGSNDSGRYSVNEEDSKIELKLEKRDPL KGRAKTPVTRKQRRVELSESYSQAGMD EGVWSSGSSKG

7042	15093	A	7729	1	1492	ALMDEILMLQDEINELQSSLAEELVSESC EADPAEQLALQSTLTVLAERMSTIRMKA SGKRQLLEEKLNQLEEQRQEALQRY RCEADELDSWLLSTKATLDTALSPPKEP MDMEAQMLMDCQNMLVEIEQKVVALSEL SVHNENLLEGGKAHTKDEAEQLAGKLR RLKGSLELQRALHDKQLNMQQGTAQE KEESDVDLTATQSPGVQEWLAQARTTW TQQRQSSLQOQKELEQELAEQKSLRSV ASRGEEILQHSAETS SGDAGEKPDVLSQ ELGMEEETSAEDQMRMKWESLHQEFS TKQKLLQNVLEQEQQVLYSRPNRLSG VPLYKGDVPTQDKSAVTSLLDGLNQAPE EVSSQSGGAKRQSIHLEQKLYDGVSA TSLDDVEERLFVATALLPEETETCLFNQ EILAKDIKEMSEEMDKNKNLFSQAFEN GDNRDVIEDTLGCLLGRSLLDVSVNQR CHOMKERLQQLNFQVSKILSKDT
7043	15094	A	773	810	1075	SLRSSKTQPRQHGTSSLLKIQKISRVW* RTLLGKLRQENCLNPGGGGCEPRLHH CTPAWATE*DSGSQKKKKQGGRKSCHF SVRT
7044	15095	A	7730	1073	1233	PYSGLGIFFFLRHGLTSPRLGCSELRLC HCTPAWVTSTKTVSKNKKQKNR
7045	15096	A	7731	34	445	STHASGDHSPKICS/TG/SYFFANSLPSKG PTILMPVNTAALTVPANPASVITVPSKLP TSSKPPGAVPSNALTNAPSKLPINSTR GMVPSKVPTSMVLTKGCASTVPTDGSSI NEETPMAPTAVGSSSLAWLDT
7046	15097	A	7732	3	416	
7047	15098	A	7733	1	2115	
7048	15099	A	7734	1	662	SLFASNVSGHFIGLAGSGAATGISVSAY ELNGLFSVLMALWVFLPIYIAGQVTTMP EYLRKRFGGIRIPILAVLYLFTYFTKISV DMYAGAFIQQSLHLDLYLAIVGLLITA VYTVAGGLAAVYTDALQTLIMLIGALT LMCYSFAAVGGMEGLKEKYFLALASNR SENSSCGLPREDAFHIFRNPLTSLDPWPG VLFMSIPSLWYWCDDQGG
7049	15100	A	7735	3	315	
7050	15101	B	7736	107	388	SKKLLFAGSRSQLVQLPVADCIKYRSCA DCVLARDPYCAWSVNTSRCVAVGGHFG SLLIQHVMSTDTSGICNLRGSKKVRPTPK NITVVAGTDL*
7051	15102	A	7737	98	473	IRGDTISYTVRSPPPRAGREYAMSTAGPP SPFSPLTQPPALYREEGKYKIPLNPGAK/ YVRAPPNPSPQTHSRLHFSPHPENIHRP WSRTRPTSPALPLKGHSTLSTPPPYVHR CPTFGGSGG
7052	15103	A	7738	2	433	GDTGHRERSLGLLREKHTWGPPHPQATP QAAVPSSRYTQPGPQGWVTVQGQPPSR GEHPRPAAGLSQLLHLGVPDGLGQSGL DCEVTPKPSYSFPGTSGAGPPGTMGSSLP GNGNWDEEAHTLPQGGQEGMNEGGVPW RLIFR
7053	15104	A	7739	328	496	HNTDLFIY/CIYEMESCSVTQAGVQWRD LGSLQPPPLGCKQCCLSLPSSWGLQVP ATT
7054	15105	A	774	499	946	LWLRPRGAGIAGAGICLREGTWLLPLR SHGGKCEAASPWVSQRLELLQKPSALW WPLGLLHVHIFWKYTCAGSFLAGKLLRI TFNFFLFFLPFPISCIFYLFLFFFRDGV SLCCSGWP*TPGLKQSSCLSLPSSWDFKC TPLCLL
7055	15106	A	7740	1	372	MEKEEPGVERKKENRVKEVIHKNRKG EGPPAGAALPLGGRGEGP/SPPEPGGAAA PRAGERCGLAGASPEPAETGTREPRR GASAARKLAAAAPVGLLRPGCPRAGR

						RAPWPGKRLSEPRV
7056	15107	A	7741	34	366	ERPGPVGTLTTPTQGPHPAGP/S/GRPGS LGFTWPYPGPCTWRPAWFPARPPAGSI TPPGFCTHTLVSLDPGRDCPSPTGDCDS LCPPHPDASPGIKAFCAQGGKKKKKK
7057	15108	A	7742	2	462	IRARNYKLRKVMVDGDIPPRVKKDAHE LILDFIRSRPPLKQVSERRRLRRLPPKQSL HEKILEEIKQERRLRPVRGE/ELGCPRVW LS/SPASSTPAEMPSPPPASTCQSQMLGA APSAR/VPRVLLKAPTLAEMEEMNTSEIR AQGPRNVTAHNQ
7058	15109	A	7743	2	1002	TGPGVPMCQVGEDYGEPAPPEPPAPRP SREQKCVKCKEAQPVVVIRAGDAFCRD CFKAFYVHKFRAMLGKNRLIFSGEKVLL AWSGGPSSSSMVWQDLEGLSQDFAKRL RFVAGVIFFDGAACGQSLEERSKTLAE VKPILQATGFPWHVVALEEEELVGSEGAY KAAVDSF/RPAAACAGGPGVVLRKLG RNSHPSP/SLDPQNLARPPAPQAQTEALSQ LFCSVRTLTAKHEELQTLRTHLILHVARA HGYSKVMTGDSCTRLAIKLMTNLALGR GAFLAWDTGFSDERHGDVVVVRPMRD HILKEVAFYNRLFVPSVFTPAVDTKAP EKAS
7059	15110	A	7744	2	397	APDTPDSSKFQRSK/NYKGPLDPQRGKIE DKVNSKSVILKEPGLDGTYSDIVTDA DEDISASHTLTEEELEKLEKLSHEIRNPGI KLISGWNIDILERGEARLWLELEKLCPPAA ELHLIVHNKEIFRLPNR
7060	15111	A	7745	1	849	QKKELGHVNGLVDSKSGKRTTSPSSDTDL LDRSASKTELKAIHARILERRASRPGTP TSSASTETPTFEQNDVDEDIIDVDEEPPVA AEPDYVQPQLRRPFELLIAAAMERNPTQ FQLPNELTCTPALPGSSKRRRKEETTGN VKKTQRELDHNGLVPLPVKVCFTCNRR CRVAPLIQRDYCPLLFHMDCLEPPLTAM PLGRWMCSNHIEHVVLNHNMTLSYRC QVFDRFQDTSQHVVKVDFLNRHKKH PPNRRVLQSVKRRSLKVPDAIKSQNQVS TP
7061	15112	A	7746	1	201	MKKKKEEEEEEEEEEEEEEEEEEEEEEEE EEEEEEEEEE/EEEEEEEEEEEEEEEEEE EEEEKKKKKHNFILSNLYIFIHFCYCKK
7062	15113	A	7747	3	112	KRTRLGMMAHA/CNLSTLGGQGGRVTR SGVRDQPDLK
7063	15114	A	7748	1	1476	LTVIRRVNENWAEGMLADKIGIFPISYVE FNSSAKQLIEWDKPPVPGVDAGECSSAA AQSSAPKHSDTKKNTRKRHSFTSLTMA NKSSQASQNRHSMEISPPVLISSNPTAA ARISELSGLSCSAPSQVHISTTGLIVTPPPS SPVTTGPSFTFPSDDPYQAALGTLNPPPLP PPPLAATVLAATPPGATAAAAAAGMGP RPMAGSTDQIAHLRPQTRPSVYVAIYPY TPRKEDELELRKGEMFLVFERCQDQDWF KGTSMHTSKVGGFPGMYVAPVTRAVT NASQAKVPMSTAGQTSRGVTMVSPSTA GGPAQKAIQNGVAGSPSVVPAAVVSA AHIQTSPQAKVLLHMTGQMTVNQARNA VRTVAAHNQERPATAAVTIQVQNAAG LSPASVGLSHSLASQPAPLMPGPATH TAAISISRASAPLAACAAAAPLTSPITSAS LEAPSGRIVTVLPGLTSPDSASSACGN SSATKPKDKSKK

7064	15115	A	7749	139	6503	LSGITKMTLHATRGAALLSWVNSLHVA DPVEAVLQLQDCSIFIKIIDRIHGTEEGQQ ILKQPVSERLDFVCSFLQKNRKHPSPEC LVSAQKVLEGSELELAKMTMLLLYHST MSSKSPRDWEQFEYKIQAEALAVILKFVL DHEDGLNLNEDLENFLQKAPVPSTCSST FPEELSPSHQAKREIRFLELQKVASSSSG NNFLSGSPASPMGDILQTPQFQMRRLKK QLADERSNRDELELELAENRKLLETEKDA
7065	15116	A	775	56	425	GQSPPGHWGHVAQARELLRPGRLPCWV PDGHTPVVRPVSGPEPTGSRILSGEESPSR PPSSQAARPQPGQPRDPSSLRIPLLLPRP* LSQSGGLASSGGLRAGALPRRPPGPALLS PTPCTSI
7066	15117	A	7750	1	5290	MTLHATRGAALLSWVNSLHVADPVEAV LQLQDCSIFIKIIDRIHGTEEGQQILKQPV ERLDFVCSFLQKNRKHPSPECLVSAQK VLEGSELELAKMTMLLLYHSTMSSKSPR DWEQFEYKIQAEALAVILKFVLDHEDGLN LNEDLENFLQKAPVPSTCSSTFPEELSPS HQAKREIRFLELQKVASSSSGNNFLSGSP ASPMGDILQTPQFQMRRLKKQLADERSN RDELELELAENRKLLETEKDAQIAMMQ
7067	15118	A	7751	241	6574	LSGITKMTLHATRGAALLSWVNSLHVA DPVEAVLQLQDCSIFIKIIDRIHGTEEGQQ ILKQPVSERLDFVCSFLQKNRKHPSPEC LVSAQKVLEGSELELAKMTMLLLYHST MSSKSPRDWEQFEYKIQAEALAVILKFVL DHEDGLNLNEDLENFLQKAPVPSTCSST FPEELSPSHQAKREIRFLELQKVASSSSG NNFLSGSPASPMGDILQTPQFQMRRLKK QLADERSNRDELELELAENRKLLETEKDA
7068	15119	A	7752	775	1128	REGLYLSRFPFHSLKPRTPQPDGTSVPGE ASPISQRLPPKVESLESLYFTPIPARSQAP LESSLDSLGDVFLDSGRKTRARRRTTQI INITMTKVRLGQGLQGSNSHFLSRASLQ
7069	15120	A	7753	331	530	LKIFFFFPSGGDMSKNVSQSQMAKLNQQ MAKMMMDPRVLHHMGGMAGLQSMMR QFQQAAGNMKGMM
7070	15121	A	7754	1	1517	MVLADLGRKITSALRSLSNATIINEEVLN AMLKEVCTALLEADVNIKLVKQRENV KSAIDLEEMASGLNKRKMIQHAVFKELV KLVDPGVKAWTPTKGKQNVIMFVGLQG SGKTTTCSKLAYYYQRKGWKTCLICAD TFRAGAFDQLKQNA TKARIPFYGSYSTEM DPVIIASEGVEKFKNENFEIIVDTSGRHK QEDSLFEEMLQVANAIQPDNIVYVMDAS IGQACEAQAKAFKDKVDVASVIVTKLD GHAKGGGALS AVAATKSPIIFIGTGEHID DFEPFKTQPFISKLLGMGDIEGLIDKVNE LKLDNEALIEKLKHGQFTLRDMYEQFQ NIMKMGPFSQLGMIPGFGTDFMSKGNE QESMARLKKLMTIMDSMNDQELDSTDG AKVFSNNSGRIQRLARPSCVSTSDVQELL TQYTKFAQMVK*MGGIKGLFKGGDMS KNGARSQIAKVLNQMAKMMMDPRVLH HMGGMARLQSMMRQFKQGAAGNMKG MMGFNNM
7071	15122	A	7755	42	449	FGLFNRLPYPPQHPKPHYSRIPGA/HAPP GPQNPSTVFLSPLYCWGPSSKSPGAPKRC PSSISTPPSATPPRTLGTSGWPGRCQKD GEAQSYQVRQDPTASPQAPAGQSRLPSWS GNQTYLQGLHGRGPRARTLQLP
7072	15123	A	7756	3	358	LLHSSTHPPTYPIHPPGHFFLPLFFPFF FSFSPSFHPSTHPLIHLSTYPIHPSVYPPV PLSLSVYSSIHLPTEYFLFQVVAH/RRSH GRISSMPGEQSPIPRLWKSPSSKPPFPW

7073	15124	A	7757	1	1668	MLVHTQPPEVHQYNHSSAATRSRQRL QLQLIWGWSQVLPMSAFYQHIIQASGLRL HACVTPGAGTHSLPFLPSVGNLPSNKG SRVYCFFAADLFDILLPMLNIYQEFVRNH QYSLQVLANCKQNRDFDKLLQYEANP ACEGRMLETFLTYPMFQIPRYIITHELL AHTPHEHVERKSLEFAKSKLEELSRMIV EGCDILLDTSQTFIRQGTMKNSNTIIVKH EWGRQLHSDWTLSSGPDILCSSKEDRS AWPTAVAVPSADDTQAKAQEKALASKP FHIRLGTMSQS*SLHQRTQE/GKLPSCS GHHRTFTLQIPLNSSAPPLSTAWRTDGG QCPLLCTGFCFCNSHSCSRTWEPPEEE DDICLPTSQARCNEYVGLRKSIMLVQKK DKKNITCRSLTPSEELGTIVKVLVFSEI MFNLDFKIVVEPPDAAFTVVLAPSRQ EKAAWMSDISQCVDNIRCNGLMTIVFEE NSKVTVPHEMIKAKVNGCTMSHLDNSLT LPFTDTEQGRSSSWTAGHVKAPCPLHAQ LPLLASLFLQELQAFARMSPYP
7074	15125	A	7758	1	2247	
7075	15126	A	7759	1	3711	
7076	15127	A	776	3	383	QGFRKLPLKTTTGKEKTHSCIVGLGHVN SGKTTTTGHLIYKCGGFDKRTIDKFETEA ADKAKGSFKNAWDLDKLKAERERGITID ISLWKYETSRYVTVIIVAP*LIDFIINMSTG TSQADCAGLIV
7077	15128	A	7760	1	226	SLEFSQSKLQYLSRVKHDEVS DTENIRIN LAERMIVEGCDILLDTSQTFIRQWDHEN QQHNHSKARVGQAVTF
7078	15129	A	7761	41	1065	GRLGPHWSPQREGEAQAWQAAGPEPCP AGRQLRPGEKSSTAAPGPGAKLPPTARG QRGRPAALSAGPTEPAEPTPTRNSGWPA SAPPV/PRWGQPLLGVPGPEAGRYSAAP SLSALRFPWWPQDVPVAVQSATDDAY EALSPSSCAFAMPSSVPAYPSITVTPDEE QNLNHYIQVLENLVRVSPSGEPGREKKS NSPKHVYSIASKGSKFKELVTHGDASTE NDVLNTPISEETTTFTPGGFTPEIGKKKHT ESTPFWSIKPNNVSIVLHAEOPYIENEPE PEPEPAAKQTEAPRMLPVVTESTSPYVT SYKSPVTTLDKSTGIGDLYRIRCCSSALR
7079	15130	A	7762	3	342	KERSREKTGGGDLQREVAREDRRWRR SQREDAREDRRWRRSSERGLRRQAVA EIFRERDAREDRRWRRSSERGRPRQ/RG GGDLQREDAREDRRWRRSSEREMPEKT GGGG
7080	15131	A	7763	205	338	NPYTYSQLFFDKGTKNHGWGRDSL FNKC CSENLSIIRKIKLDP
7081	15132	A	7764	1	666	GDPGAGPGDHNRFDCGPQPPPPKCELL HVAIVCAGHNSSRDVITLVKSMIFYRKN PLHLHMVTGAVARNIMETLFTWMVPA VRVSFYHADQLKPQVSWIPNKHYSGLY GLMKLVLPALPAELARVIVLDTDVTF SDISELWALFAHFGVILLRLDRLRQAG WEQMWRLTARRELL/GLPATSLADQDIF NAVIKEHSGLVQRLPCVWNVQLSNHTL AE

7082	15133	A	7765	3	1289	INFPTTSGLDGDPGAGPGDHNRSDDCCPQ PPPPRCELLHVAIVCAGHNSSRDVITLV KSMLFYRKNPLHLHLVTDVARNILETL FHTWMVPAVRVSFYHADQLKPQVSWIP NKHYSGLYGLMKLVLPSPALPAELARVIV LDTDVTFASDISELWALFAHSDTQAIGL VENQSDWYLGNLWKNHMPWPALGRG FNTGVILLRLDRFRKAGWEQMWRLTAR RELALSLPATSLADQDIFNAVIKEHPGLVQ RLPCVWNVQLSDHTLAERCYSEASDLK VIHWNSPKKVLIVKNNHVEFFRKIYLILL ENQGNLLLEEVFLCPSQPPTVADQLQR PLPQLDEEDPCFEFRQQQLTVHRGHLLF LPHEPPPPRPHDVTLVLAQLSMDRLQMLE ALCRHCPGPVSLALYLTDAAEQQLHFV EANGVGIDRV
7083	15134	A	7766	530	820	
7084	15135	B	7767	1	954	MATAATIPSVATATAAALGEVEDEGLLA SLFRDRFPEAQWRERPDVGRYLRELSGS GLERLRREPERLAEEAQLLQQTDLAF ANYKTFIRGAECTERIHRLFGDVEASLGR LLDRLPSFQQSCRSPPRAARNAVSIAMAG AGTAGPASGPGVVRDPAASQPRKRGRE GEGARRSDTMAGGGGSSDGSRAAGR RASRSSGRARRGRHEPGLGGPAERGAGE ARLEEAVNRWVLKFYFHEALRAFGRSR YGDFRQIRDIMQALTFFRGTLDQSSKQE LSLDLSSSEIKNIQVNITYSLRSRDCANFD ILYDIKPF*
7085	15136	C	7768	97	408	MKTKVQPRLTVRVARNCSPKNKAHDNK QNWSWEEDSQITEPSAGLNSSQEAVSAP PSKPTVFNQPLPGEKNPKYEDLLCRNFG AGWWSWLGVLVLLPGIKETFS*
7086	15137	A	7769	1694	1866	PLIACSFFLFLFFFFLRQSLGSHVHPLGV QWRDLGSLRPPFGLTQFCSLSLPSWN
7087	15138	A	7770	106	317	CSAETEREIGRRK*CIQESSSPSLSIKKCP ICKAD*YL*SHLGATADAAPLFQLSSL*Q DLPSYREADL
7088	15139	A	7771	321	449	
7089	15140	A	7772	2516	2717	FVKSKALAFFLSFFFFFLKQSLSVTQAG VQWVPVDSLQPLPPRFKRFSCLSLPSSWD YRCVPQCPAN
7090	15141	A	7773	3	282	
7091	15142	A	7774	1	1126	MRPGSLDVTLEPRSEGGKEKSIPERRNG PCKDPGAAACKLCLTSVLFATNRHMYL HNLLLRQGVSRASRQSALTQSSGTPAMY QCSKTYIFQGIQVDYQEVTHTGPLSIEG SMLDIKIYIVNRGEHKNGVLEEAILATIL KEVLEGLDYLHRNGQIHRNSRKELNDIR FEFTPGRGPKGNDGECDEKHITTVLMRV EQQWDHTERKTQTQMSTEAKVNDTAD GVSQELFSAGLVDGHDVVIACPSRNRL FIGIISTFPGAQAKTLGIVLDFSFSTSHPT HLNVPRILPLLTIHPITFQAPLNSQLSSCI HPFAAIPASVSLAQPVLISTARDPGTSH YSSALGFIGQIPAYMELSPVIGELCLSK VTE
7092	15143	A	7775	2	1622	
7093	15144	A	7776	1	698	MAAKLVGIEFPCWVKMLMEKGHOKT REHNYPSEMEQSEKAGVTDNIQGKTKAL AGSRQSVANGKNSHCKENVTWLLIIHYV QPMKPYEVFWIEFVTHQKATKYLQCLPT TSPDAVFPFGELLAELLKIPFVYSLRFSPG YAIKHSGLLPSPSYVPVVMSELSDQM TFIE/RGRPTTLSETMAKADIWLIRNYWD FQFPHPLLPNVEFVGGLHCKPAKPLPKTL GHGWDRAP
7094	15145	A	7777	1	1584	

7095	15146	A	7778	2	1627	AATGKQALHCIRMSMKWTSALLLIQLSC YFSSGSCGKVLVWPTEFSHWMNIKTILD ELVQRGHEVTVLASSASISFDPNPSTLK FEVYPVSLTKTEFEDIKQLVKRWAE LPK DTFWSYFSQVQEIMWTFNDILRKFCCKDI VSNKKLMKKLQESRFDVVLADAVFPFG ELLAELLKIPFVYRPRFSPGYAIEKHSGG LLFPPSYVPVVMSELSDQMTFIERVKNMI YVLYFEFWFQIFDMKKWDQFYSEVLGR PTTLSETMAKADIWLIRNYWDFQFPHPL LPNVEFVGGLHCKPAKPLPKEMEVEFVQ SSGENGVVVSLSGSMVSNSEERANVIA SALAKIPQKVLWRFDGKNKPDITLGLNTRL YKWIPQNDLLGHPKTRAFITHGGANGIY EAIYHGIPMVGVP LLADQPDNIAHMKAK GAAVSLDFHTMSSTDLLNALKTVINDPL YKENAMKLSRIHHDQPVKPLDRAVFWIE FVMRHKGAKHLRVA AHDLTWFQYHSL DVTGFLACVATVIFITKCLFCVWKFVR TGKKKGKRD
7096	15147	A	7779	1	187	SGRPFFFFGLPFLFFFFF*DRVSLLLPRL QCNGTISAHCNLCPLGSSDSPASASRVAE LP
7097	15148	A	778	213	500	SKRCLSLGRGASSLEAAEHLSCCPQADG LSRSPQWASAPPRQLLSCPSAGPRGQL ARSPGSRRGVWPPQGPPHQHSALT*AP AQRKRKNG
7098	15149	B	7780	436	711	DVYKIGGIGTVPVGRVETGVLKPGMVVT FAPVNVTTTEVKSVEMHHEALSEALPGD NVGFNVKNVSVKDVRRGNVAGDSKND PPMEAAGFTAQ*
7099	15150	B	7781	26	384	MHHEALSEALPGDNVGFNVKNVSVKDV RRGNVAGDSKNDPPMEAAGFTAQVILN HPGQISAGYALYWIAIVDMVPGKPMCV ESFSDYPPLGRFAVRDMRQTVAVGVKA VDKKAAGLAS*
7100	15151	A	7782	3	523	FAPVNVTTTEVKSVEMHHEALSEALPGD NVGFNVKNVSVKDVRRGNVAGD/SKND PPMEAAGFTAQVILNHPGQISAGYAPVL DCHTAHACKFAELKEKIDRRSGKKLED GPKFMVPGKPMCVESFSYDYPPLGRFAV RDMRQTVAVGVKA VDKKAAGAGKVT KSARKLQKAK
7101	15152	B	7783	32	188	MVVTFAFVNVTTTEVKSVEMHHEALSEA LPGDNVGFNVKNVSVKCVIWFSLAPX*
7102	15153	B	7784	60	209	MHHEALSEALPGDNVGFNVKNVSVKDV RRGNVAGDSKNDPPMEAAGFTAQ*
7103	15154	A	7785	3	313	
7104	15155	A	7786	13	555	
7105	15156	A	7787	3	366	IGY/NPDTVACV/PILGWNGDNMLEQSAN MPWFKGWKVTRKDGNASGTTLEALD CILPPTRPDKPLRLPLQDVYKIGGIGTVP VGRVETGVLKPGMVVTFAFVNVTTTEVK SVEMHHEAQKAK
7106	15157	A	7788	1	513	EAGISKNGQTREHALLAYTLGVKQLIVG VNMKMDSTEPPYSQKRYEEIVKEVSTYIK KIGYNPDTVAFVPISGWNIAKFAELKEK IDRRSGKKLEDGPKFLKSGDAIVDMV PGKPMCVESFSYDYPPLGRFAVRDMRQ TVAVGVKA VDKKAAGAGKVT KSAQK AQKAK
7107	15158	A	7789	1	1099	
7108	15159	A	779	1	615	

7109	15160	A	7790	1253	2560	SLVMLPLFDMVPGQAHVLLRASQDYPPF GSLCWFVIMRTDSCGWVSIKSSGQKRLL ELIDAPGHRDFIKNMITGTSQADCAVLIV AAGVGEFEAGISKNGQTRHALLAYTLG VKQLIVGVNKMDSTEPPYSQKRYEEIVK EVSTYIKKIGYNPDTVAFVPISGWNGDN MLEPSANMPWFKGWKVTRKDGNASGT TLLEAVDCILPPTRPDKPLRLPLQDVYK IGGIGTVPVGRVETGVLKPGMVVTFAPV NVTTEVKSVEMHHEALSEALPGDNVGF NVKNVSVKDVRNGVAGDSKNDPPME\A AAGFTAQVI\NLNHPGQISA\GYAPVLD HTAHACKFAELKEKIDRRSGKKLEDGP\A KFLKSGDA/APLVDMVP\GKPHVCLRSFS \DYPPLGRFAVRDMRQTVAVGVIKSS/V KKAAGAGKVTKSAQKAQKAK
7110	15161	A	7791	39	362	AEKWARNMPFFDLQMTDQVSLRLTW SELFGLNAAQCSMPLNEAPLLAAAGLQ AYPMSADRRVAFMDHIRIFQEQA EK FRA LHVGSPEKQCLKAIVLFTSNTWGRG
7111	15162	A	7792	19	384	FISSIKFIMSFNFTSLFHFFISLGQFIS SSK/SHFISFHVISSVHLIFSSHFMGSSQ LFSSDHFIISCHRFMSYLLRSVQFHNISF HYFRSSHLITSCHHSSCNQNSSSSQH F IS
7112	15163	A	7793	16	450	TQGS HQSPPPGS\PHAAHTCCPGRGGEA GGTGSLCLLGQGHTRPAALKDWPGR PEGHKVRS DPPGRPASSTVQLKGLSGER DGCPLRRGPGPHRAEGSPSRALRPPGTR GNTAT RTPVSSGMRAASCQAWRNEVRS LMVQAP
7113	15164	A	7794	1	427	
7114	15165	A	7795	1	330	
7115	15166	A	7796	3	1229	SPPSPLAPGLASQDSRPVFPSPTPAMA AVPTQPSKEGPWSPESPMRLITAPLPPGP SMAVPTLGPGEIASTTPPSRAWPTQEGP GDMGRPWVAEVVSQGAGIGIQGTITSST ASGDDEETTTTTITITITITVQTPGPCSW NFSGPEGSLDSPTDLSSPTDVGLDCFFYIS VYPGYGVEIKVQNISLREGETVTVEGLG GPDPLPLANQSFLLRGQVIRSPHQAAALR FQSLPPPAGPGTFHFHYQAYLLSCHFPRR PAYGDVTVTSLHPGGSARFHCATGYQL KGARHLTCLNATQPFL/WDLKEPVCIAA CGGVIRNATTGRIVSPGFPGNYSNNLTC HWLLEAPEGQRLHLHFEEKVSLAEDDDR LIIRNGDNVEAPPVYDSYEVEYPPPPPL QPHYHRVSV
7116	15167	A	7797	110	342	FVLFP TKVYEGERAMTKDNNLLGKFELT GIPPAP*GVPQIEVTFDIDANGILNVS AVDKSTGKENKITITNDKGKEA
7117	15168	A	7798	1	335	NFCTREDHQYAPLDPKHGHLPPRMPPSE RLMAAEAAFYSPPYHDRPTNSEGWEHT GLYESFRAKLRSRRKGPEKRNSGPSRSR NRSKSRGRSSRSNSRSS*SSGSYSRS
7118	15169	A	7799	110	409	
7119	15170	A	78	226	481	CLAHSRHSINISTCTGAEGHESESFSYWG TRGPSATMACDGLTRTGHSSPSRARSP LLCARSLTKAACQ*AVPVTWCHCWRPQ G
7120	15171	A	780	140	459	RSSLLPCLGLWTHLIPVKVRDSLGP EAFRGEKADMPVLYDRLLKLMEMLYFKSG TIPMFYG*APRRVYIIGERIH YCGSYV LPMAVEQDVLI AVEPVKTYALQLAN
7121	15172	A	7800	40	621	

7122	15173	A	7801	1	338	GTSFYLYRKGYLSLSKGVPM SHYAGTLL LLLAGVACLRGIVRWTPHYRKTMTIP* ASHRNQSSKYPRHVANYNCDFRSWPDD FHCDEPITRNESQGGPIRRSVHTASPKPM
7123	15174	A	7802	1	390	ILDCHTDDSGTYRAVCTNYKGEASDYAT LDVTGGDYTTYASQRIDEVPRSDFPFLT RTEAYAVSSFKKTSEMEASSSVREVKSQ MTETRESLSSYEHSASA*MKSAAL*EKSL EEKSTTRKIKTTLAAR
7124	15175	A	7803	3	235	VNSAEAEQANTNLSKFRKVQHELDE/ AVALPHFDLLIQLVLHLADEAEERADIAE SQVNKLRAKSRDIGTGGLNEE
7125	15176	A	7804	2	561	MRPHRLDEAEQIALKGFFKQLQKLEARG RELENELEAEQKRNAESVKGMRSERTP SKELTYQTEEDRKNLAAACRTLVDKLQL KAKAYKRQAEAEQSPTPNLASKFRKV QARAGLRAEERADIAESQVNKLRAKSR DIGTKGLEMKELAFATSLNLAPPLGRCP ANAPCWSLCNSFLGREAE
7126	15177	A	7805	3	303	GRRPPALIDSRSPSPASPTQ*CRPPSPFGP APPPRLWLAPPFCPPPPHGYGPFPAKR RGAALGLTRVLPSPGSAVRRSPGPGPS ACDKVFRTTSR
7127	15178	A	7806	190	389	RRTYTSHLLACLRQGLAFSPRLECGGKIR AHCSLQLYGSSDPPT*APQTAGTKQHNQ RIAQCNA DN
7128	15179	A	7807	3	271	FFLRQSHSVTRLECTGAI*AHCNLCPLGS SDSPASAS*VAGITGMCHHARLIFVFLVE TGFHHVGQAVLELL/NLMICPPQPPKVLG LQA
7129	15180	A	7808	610	923	FYLSEAEFFFFFETES/HLLSPRLECSG MMSAHCNLRPLGSSDSPASAS*VAGITG GHHPAQLIFVAF/MYQPGFCHVGQAGQQ LLA*VICLPQPPKVLGITGA
7130	15181	A	7809	487	796	LSIFFFFFEGRGAIVANVSLNFPKSKPP PSLSKEPGTTGAAPPREIFFPPKTRLGFA LHPGSPPPPGPWAPLWSKGEKV GILKKH KVGRGRGFSPVSPPF*KPPPSLSKEPGTT GAAPPREIFFPPKTRLGFA LHPGSPPPPG PWAPLWSKGEKV GILKKHKVGRGRGFS PVSPPF
7131	15182	A	781	595	1060	ARFLPKYQSPTGPHPSFNAFLSLGAMCV LPRPNFHSLAVRSPVPGGPAPLVPKKE* EGLGVTSQSRPDCSPMSGTPRCRS*LRP AAGRGCSPLLGGCPWTVTHPLRTKAGC TLSWAQQPVVLPVGGEGPRCASPVAVL GFSPCALCHLDPPVK
7132	15183	A	7810	1	340	GTSQVLTLTIAEV**NLG*VGCK*CKHTE AKRMPCAEDYLSVVHEQICVAHENTPVS DRVPIRCPESLAIRLPCFSALEVDETYGD* EYNAEAFTLHADICTLSEKERPIKKQ
7133	15184	A	7811	3	337	IESSLHQVESMHGAGNAKKNWQ/RIQEH FFFATFHPLKDYCL/EGTNLVEADNQAE WTDVQKKIIPWNSRVSDLDLLELLFQDR AARLGK\SISRILIRCGPSLHSDKPTNFRE G
7134	15185	A	7812	3	926	YGEENLKTSICTFLAVLSHLDIITQNIPEK KLILKQALIVVLQWCFNHNFSVRLYALV ALKKLWTVCKVLSVEEFDALTPVIESSL HQVESMHGAGNAKKNWQRIQEHFFFAT FHPLKDYCLETIFYILPRLSGLIEDEWITID KFTRFTDVPLAAGFQWYLSQTQLSKLKP GDWSQQDIGTNLVEADNQA EWTDVQK KIIPWNSRVSDLDLELLFQDRAARL\GKSI SRLIVVASLIDKPTNLGGLCRTCEVFGAS VLVVGSLQCISDKQFQHLVSVAEQWLPL VEVKPPQLIDYLQKKTEGYTH

7135	15186	A	7813	3	360	ATCSSDQSVKVVWDKSESGDWHCTASW KTHSGSVWRVTWAHPEFGQVLAFTFD RSSAVWDEILSESRDNL*GHTHWVKRTT LEDSIVSATCV*SFLSHVGIMLLSCGTFPP ACICGVFP
7136	15187	A	7814	9	305	SHLLRSLRQENRLNPRGGGCNQRSGHC TPAWATRAKLHLKKQTNKMLANLIQQH IKKVIHHYQVGFTPGMQG*FNICKSVSVI YHINRTTHKNVAAAA
7137	15188	A	7815	3	217	AASTMPMSFEWQRQ*RFPPFYTLQPNVN TRQKQLTA*CSLVLSLCRLHKQSSMTLIK TRLTSDSITVMLDC
7138	15189	A	7816	15	335	QHFWERFHVTKDRINTVERQETDWKIFA TYLMKKV*ISRKCYSYKLVKKQLNR KWAKEKNKQSQKKKQSGQ*TKTVQPQ* NKRNNAN*RYYLSPISLAKSNKLN
7139	15190	A	7817	1	331	GLIEILVIYVSDTPVK*DV*SDIFEQ*AYG KIDGGNDVCDLQSSEGTNTKMKNNEEM MIGEAMDETGHGETENEGISTKTSKPD EAETNMLIAEMDTFVCDTVEMSTEG
7140	15191	C	7818	51	200	MSTPXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXS*
7141	15192	A	7819	3	219	MLAGCSRTPELR*STHCSLPKCWDYRRA HNAQPFLTLN*RSETRRSL*F*IMWLPLE FLGFPLESQQGCTA
7142	15193	A	782	71	237	EQPGMVTHTCNPSTLGGRGGWIT*DQEF KTSLANMVKPCLCWRYKKLAGHGGAC L
7143	15194	A	7820	1	358	VHCLVPDLLQSNNNPCYWGMKYAA EALLEGKPEGTFLLRDSAQEDYLFVSFR RYSRSLHARIEQRNHNFSFDAHDP*VFHS PDITGLLEHYKDPSA*MIFEPLLSTPLIRT FPFCL
7144	15195	A	7821	260	481	LILKFV*NHKIPQIAKTILSKENKAGGITL PDAKISCKAVVTKTALYWHTNRHIEQW NRIANTEINPNICNQLI
7145	15196	A	7822	1	306	VKAKAKKLQIQPIQLELLYCSYDMQEED FAHRAMDYFPKIENNLSTRMDHNVSSF CIENWHQLESLSLLILHNMPHYEEDDEFE GLRLDMVQ*RLTSCSDAG
7146	15197	A	7823	3	396	SSLSSLSSSVSVTFGFGTFPSAVSSSIPDG GLALAFSSSGLSTSFSSP*SHSSSSPPVPP LSSDTRRSTSPADMAAPSAT*TRRSTAPS NPFPSLAAPRREKGGNPPTNERRKLETPI PGRRRQRRQR
7147	15198	A	7824	3	344	HEHECYAKVLYELKPVGEEPQNVSKQN CDLFEQLGQYEF*NALLVRYTKNPVPGT TPALGQVLRNLRKVSSKCKHPEAKTM PCAEDYLSVILNQLCALHDRSAVSDRVS RCWT
7148	15199	A	7825	1	413	RAGYRQKWGSLATVIGQLGLPSGEGLV WPQRRREGHRNAHCSELVDDLHVITQ NRANHRPRCGSLLSELKFAPLALQGR QSKTLSQKKNKQTTTKKNTKKQPGSVA HACNPSTLGG*GRQITLPSGVRDQPGQH
7149	15200	A	7826	37	363	ASDWNQDRARGRGQGGCETRDSSEQSQ GTNGQPPAEASKDSWSSGKMAR*APSP QRQKAGYPGSPSPQAPASMRSLGPPQF QEPQALFPLEVPIPSHTRNKMARA
7150	15201	A	7827	3	354	HERAFLNNSCFL*AFDPYQCDRYLFKIV TDVYYTPYVLIYYI*APLPLLLQLTHTF LSLFFL*VLNIYALVYLSTALPLSLFISISS PRYSCLCLFFHFLSLMLFLSSLSMYCSHY
7151	15202	A	7828	2	269	ARVAPLKGVEQEVRHEGEVTKPEKEK GEETRIENGKLIVVSDSCGRVYVSGKIYY PM*AYNDGLILERYQIMPDIIVSYVFIMI

						CLD
7152	15203	A	7829	2	350	KDIRVGHRQNRALPPQASPTVAPGQPT ALPPTGHSGPTMGWPSRLSQLSLITAPTS ASPTVVKLPSGACWPLSSTFASSPLSLVQ *P*NSDSHDATSAMAPSSSRECLSPWPA R
7153	15204	A	783	236	404	EDGHHSGLHSHKQKQPAWFSMVTHTCN PNTLGGRGGWIT*GQEFETSLTNMEKPC L
7154	15205	A	7830	2	376	SHCLEPKDIRVGHRQNRALPPQASPTV APGQPTALPPTGHSGPTMGWPSRLYQLS LITAPTSASPTVVKLPSGACWPLSSTFAS SPLSLVQ*P*NSDSHDATSAMAPSSSRE CLSPWPAPRA
7155	15206	A	7831	176	379	SVTDHPIYNCNLSPSPNPGSPDPSDPVLPF VVMTDYLLP*CVICCCFLSDPPHCSPHPV GGSFFFGIN
7156	15207	A	7832	1	344	NSGRVGSGLNISPLPPGPPGPRPLEEATP VLLSQGIPEREDSFRNLRTDLYIHQLKS* DSPEISSLCQGEATPRHSDKHNS*NAAS EGKGC GFPSPTMEVEIASHDEEDVIHS
7157	15208	A	7833	355	535	PNRPITGEVTTKNLTKKSLRPDGTDFEFC *TFKEGFIPTLLKTVKEGLHPTFLYEASIT L
7158	15209	A	7834	61	250	RSRLCAPVRESHTYLIMPGLCC*FFLYYI FFGFFSVVFCLLSFYSPFFSVSSVSFV*F WVF
7159	15210	A	7835	3	66	DAWEKKICETEDWLFENHQRISSSRMKR NKEQLQDV*NTIKRTNIRIIGVIKEKREKG RKLI*EIMAENSPNLGKDMISQVYEAQRS PYRIHKKKTSPKHMIIKLSKAKSRR*IRG
7160	15211	A	7836	3	146	HMVAGAVAGILEHCVMPIDCVKTRMQ SLQPDPAARYRNVLEALWRIIRTEGLWR PMRGLNVSASCAGSAYALYFACSD*LTQ LPAIAMCWPRSGGL
7161	15212	A	7837	2	329	VASGRRKNLLSKVTGLEVPSTPDRPC SGRQSLNPPVTSFPNPSQRNRTPPPTTRQ MATL*EALHGSHLPPGRAERCTSSPGPR TTRPQVSDRRAQSPTS YVGPHRP
7162	15213	A	7838	2	356	EAGAHT*ITMNKQRLKETVDDTVEVSD FTVSRNAHEAFNTAFTTLAACAASIG*V LLYLTLTTCPC*CKTKRQNNMLHQSNA NSSILRPGPASDASADERNACARKRAVL LEPLKD
7163	15214	A	7839	3	264	
7164	15215	A	784	2737	2915	KNVVHHTHQGILYSHKKEQD*LGVAHT CNPSTLGGRGGWIT*GQEFETSLTNMVK PCLY
7165	15216	A	7840	42	226	
7166	15217	A	7841	1	507	LQLEAEEQRKQKKRQSVSGLHRYLHLL DGNENYPCLVDADGDVISFPITNSEKTK VKKTTSDFLEVTSATSLQICKDVMDALI LKMAEMKKYTLENKEEGLSDTEADAV SGQLPDPTTNPSAGKDGPSLLVVEQVRV VDLEGLSKVVYPSK\ADL\ATAPPHVTV VR
7167	15218	A	7842	51	340	PILVYRPDVPD*VAKDYASFRNYT*GPLL DRVFTTY*LMHHTQTVDFIRSRHAQFGG FSYGKMTVMEVEDLLDGLMDESDPDN FLKSFA*KIAY

7168	15219	A	7843	44	1352	KMLYKNFIMQSQELTALWEAKVHPAML GLDELGRSGCHCTQADLRFGDAAGRD PGQDNDRNTAEPAPPPPRVMAAAAL RAPAQSSVTFEDVAVNFSLEEWSSLLNEA QGCLYHDMLETLTLISSLGKRQTLHTR ERPYESIECGKAFAEKSSLINHRKVHSGA KRYECNECGKSFAYTSSLIKHRRIHTGER PYECSECGRSFAENSSLIKHLRVHTGERP YECVECGKSFRSSSSLLQHQRVHTRERP YECSECGKSFSLSRNLIIHQVHTGERH ECGQCGKSFSRKSSLIHLRVHTGERPYE CSDCGKSFAENSSLIKHLRVHTGERPYEC IDCGKSFRHSSSFRRHQVHTGMRPYK* SKFWKFCSPGFLLLQGQVRVHTGSRCEC DKWGIFFS*NASFFT*KSAPTTEVPFECN ECEKAFSPLSLVT
7169	15220	A	7844	2	353	NLLYQFWIHTEVINNLGPLELILNTRSHH RVHDGRNRYCIDKNYAGVLIWDKSFGT FEAENEKVYGLTHPINTFEPIKVQFHHL FSIWTTFWATPGFFNKFSVIFKGP*WPGG KP
7170	15221	A	7845	3	386	TVRVACDHHGNMQSCHAEALIHAPGL STGALVAILLCIVILETVVLFAALRRQR KKEPLIISKEDIIDNIVRYNDEGGGEEDTQ AIDIRTLMNVPPI*DTHLRRCFAP*TSLYY HRATPTRSCYHP
7171	15222	A	7846	151	352	YCCTYYIFVLFIP*SSCGLTLIFITCILFGSI SFFLFFTIVFSIIVTTFKFRLLYSIIFLSYLL C
7172	15223	A	7847	2	265	VKPSP*PLTGALSALLMTSGLAM*FHFHS ITLLILGLLTNTPPVQKGLRYGILFITSE/V FFAGFF*AFYTPA*AYPQLGGTAQQDT
7173	15224	A	7848	1	156	GIRHEAYHIVKPSP*PLTGALSALLMTSG LAM*FHFHLKKKKKIGSSFIAGV
7174	15225	C	7849	512	778	MTSGLSHVDFTSNSITLPHTRAYXTNTL NHIPMMARMLTRRKAHTKGHHTRTCSK KAFRYGDKSYLFTSGSFFSSQFILEPFLP LQA*
7175	15226	A	785	361	710	DLFWLF*MDKFLDITYTLPRLNQKEVK
7176	15227	A	7850	15	613	LKTTHLLFQVSVGQESRCGLAKSSGSKS LTRVKVRGQPRWLCHLKAQLGKDLLLS SLTWLLAACGSSPVVGLWASAPGLLLAS HHPRFSATWVFHKVAHNTAAGFMSTGK QEG*RDKITAKQKFASYNLISEVTTHHFL PYSIYEKQVTRSSPHTKERDSPRG*LSEG KDHWEFPQKLPAVDVIALFYENKHQTH YIHL
7177	15228	A	7851	66	355	KSMTDGHITVTNIRQLPARTLYTHWPR EFSP*SPPLERMHTRGARREARQKAPRIR DKRRGKSRVHCLGEELANGGGWDRIRW GKGERQDSDGRV
7178	15229	A	7852	3	358	HASAHASGQDDQLERDHEN*DRFVRQ VVGINNYRISEESGHPYNIFGKIFHDCAD LDTSEH*LCKCDSFDKTLKPTINLVSYNR NFA*TNIDENFRCGKSPSYSSCYSKHEEL HNGM
7179	15230	A	7853	79	413	LSKGTGRKRDGLTLPAHPKAKTDPAAAP QGQPGVGVRSSPPCPG/QREQQSAGSP GWMGGGCPVVS*PLKGQNPSPSSLGG SKGSFFSPDPAVARRRVRGEERGQVR E
7180	15231	A	7854	171	173	LTAEACLSFSPSPSSLGVSCHPHHGGGLG PAHPSALPQPPGCIFEAAWPPRAL*PLSS PLTPPAPGHCRIRRGEEGASAAFPGLGT GLVLSFEDDHLQD*GQHTQSQPGASP QTLCCFRGLGHAGELLTPPTVQPLFPE SASKWPQLFGPRILPGPPKGSPTTKAWPP GVCGQQLPLVKGHPG*PSPASGRSRCEV SVPSCPVVLPLGWLCLAPAGRSQHWB

						SVPSCPVVLPPLGWGCLAPAGCRSQHWR D
7181	15232	A	7855	27	263	FHCFISNF*VANRSSLLIDFSVGLLKCKS FIFFNAILHYCLMMVCEYDSLFLSYMF LLIFFYFYIFIYLLFIHPY
7182	15233	A	7856	92	354	VLNSI*SGNQGKSYANVYRLLYLDPIPKI YAEAYTP*NVNSTNLETKSPKTIQKFPED REFKNDFFEKTKNGDRETGAHPFLLFL V
7183	15234	A	7857	464	2848	GETGMSTALHTTVAMRCPMLGGGGGP TYGPPQPWGHDPVHIMQHHVLPQARLG SIAEIDLGVPPPVMKTFKEFLSLDDSD ETEAVKRYNDYKLDERRQQMQDFFLAH KDEEWFRSKYHPDEVGKRRQEARGALQ NRLRVFLSLMETGWFDNLLDIDKADAI VKMLDAAVIKMEGGTENDLRILEQEEEE EQAGKPGEPSKKEEGRAGAGLDGERK TNDKDEKKEDGKQAENDSSNDDKTKKS EGDGDKEEKEDSEKEAKKSSKKRNRK HSGDSSFDEGSVSESESESESGQAEKEE EAEALKEKEKPKEEWEKPKDAAGLEC KPRPLHKTCSLFMRNIAPNISRAEIIISLCK RYPGFMRVALSEPQPERRRFRGWVTFD RSVNIKEICWNLQNIRL/RECELSPGVNW DLTRRVRNINGITQHKQIVRNDIKLAACL IHTLDDRTQLWASEPGTPPLPSLPSQNPI LKNITDYLIEEVSAEEEEELGSSGGAPPEE PPKEGNPAEINVERDEKLIKVLKLLLYL RIVHSLDYNTCEYPNEDEMPNRCGIIH VRGPMPPNRISHGEVLEWQKTFEKLT LLSVRESLSEEAQKMGRKDPEQEVEKF VTSNTQELGKDKWLCPLSGKKFKGPEFA RKHIFNKHAEKIEVRKEVAFFNNFLTD AKRPALPEIKPAQPPGPAQILPPGLTPGLP YPHQTPQGLMPYQPRPPILGYGAGAVR PAVPTGGPPYPHAPYAGRGNYDAFRG QGGYPGKPRNRMVRGDPRAIVEYRDL APDDVDFF

7184	15235	A	7858	1073	3541	GETGMSTALHTTVAMRCPMLGGGGGP TYGPPQPWGHDPVHIMQHHLPIQARLG SIAEIDLGVPPPVMKTFKEFLLSLDDSDV ETEAVKRYNDYKLDFRQQMQDFFLAH KDEEWFRSKYHPDEVGKRRQEARGAL QNRLRVFLSLMETGWFDNLLLDIDKAD AIVKMLDAAVIKMEGGTENDLRILEQEE EEEQAGKPGEPSKKEGRAGAGLDGGE RKTNDKDEKKEDGKQAENDSSNDDKTK KSEGDGDKEKKEDSEKEAKKSSKRN RKHSGDDSFDEGSVSESESESGQAESE KEEAEEALKEKEKPKEEWEKPKDAAG LECKPRPLHKTCSLFMRNIAPNISRAEIS LCKRYPGFMRValsepQPERRRFRGWV TFDRSVNIKEICWNLQNRGARSLNRWC SRGKGLRAAVSLASGLRECELSPGVNRD LTRRVNRINGITQHKQIVRNDIKLAAKLI HTLDDRTQLWASEPGTPPLTSLPSQNPI LKNITDYLIEEVSAAAAELLGSSGGAPPEE PPKEGNPAEINVERDEKLIKVLKLLLYL RIVHSLDYNTCEYPNEDEMPNRCGIIH VRGPMPPNRISHGEVLEWQKTFEELTP LLSVRESLSEEEAQKMGRKDPEQEVEKF VTSNTQELGKDKWLCPLSGKKFKGPEFV RKHIFNKHAEKIEEVKKEVAFFNNFLTD AKRPALPEIKPAQPPGPAQIIHVPVRVVL PPGLTPGLPYPHQTPQGLMPYGOQPRPIL GYGVPTGGPPYPHAPYGAGRGNYDAFR GQGGYPGKPRNRMVRGDPRAIVEYRDL DAPDDVDFF
7185	15236	B	7859	145	226	MAVNCSEMRLKSSWNGCAIANEGDCHL EATSICSSTSFMDMLGEFRHCESILLAST AX*
7186	15237	A	786	2	424	
7187	15238	A	7860	136	1559	ILTMREIVHIQAGQCGNQIGAKFWEVISD EHGIDPTGTYHGSDQLDRISVYYNEA TGGKYVPRAILVDLEPGTMDSVRSRPGF QIFRPDNFVFGQSGAGNNWAKGHYTEG AELVDSVLDVVRKEAESCDCQGFQLTH SLGGGTG/SPGMGT/LISKIREEPDRIM NTFSVVPSPKVASDTVVEPYNATLSVH QLVENTDETYCIDNEALYDICFRTLKLT TPTYGDLNHLVSATMSGVITCLRFPG QLNADLRKLVS/VNMVPFRLHFFMPG FAPLHQPVESQQYRGSHKCRELTQQ/VSF DAKEH*WAACGPPATGRYLITVAAAFR GRMSMKEVDEQMLNVQKN*QLTLWE WFPQQCSRTACLFTSQPRGSRWAVHLS LGNRHSRSLFQSGIFGSSFTWPCFRRK AF/LFWH/YTQGEHGHTMGVSTEG*EA TLNDLRL*SIKQLPRMPTQEEEDFGEEA EEEE
7188	15239	A	7861	2	304	ARGLCPLGYTGLKCETDIDECSPCLNN GVCKDLVGEFICECPSGYTGORCEENINE CSSSPWLNKGICVDGVVCYCTFV*GFCI FKFSCSSCPLYTI
7189	15240	A	7862	1	345	GTSGTSRFL*DVLMNDFGTRWRFYAT VIYQKPQLKSLILE*RETWVLGTDGTLQ TKEEKDPRLRKTLVYVAPLLVLGSDVL EALSGAAPRLFLKDAIRDQARIGRAERT VL
7190	15241	A	7863	2	343	VRSAYPRRLENSLAGQRRHHLCHPLLP AGGARAPQPQPQLLGARPGPGRCRM RRRPQAPRAGRGAALARAL*PLSSTASR RGACPGAAPSDSPEDPASDHGHSPLGG RC

7191	15242	A	7864	1	338	QIDEIVTETLLTEAERGAKVYLTTGYFNL TQAYMDLVLGTRAERYQILLASPEVNGFF GAKGVAGAIPAAVYHIERQFFNDECSL* QSRVAVQLSEYWRCSGRSLSMFVRHDI
7192	15243	A	7865	174	361	
7193	15244	A	7866	1	1259	VRCRPVRNSRVDPVRVMAAVFLVTLYE YSPLFYIAVVFTCFIVTTGLVLGWFWD VPVILRNSEETQFSTRVFKKQMRQVKNP FGLEITNPSSASITTTGITLTTDCLEDSLLTC YWGCSVQKLYEALQKHVYCFRISTPQA LEDALYSEYLYQEYFILLSSDIPISTEN*T SYG*SVANLLIILGILEACLLQNKHSPCI RTCSVYRISVSGTGFACFRLIYPLALIIRL LMDKVPLTY*SFLGY*KHVYCFRISTPQA LEDALWSEYLYQEYHFIKDSKEEYICQ LPRDTNIDDFGTVPRSRYPLVALLTLSE DDREIYDIISMVSVIHIPDRTYKLSCRILY QYLLLAQQGFHDLKQLFMSANNFTPS NNSSEEKNTDRSLLEKVLSESEVEPSE ENSKDCVVCQNGTVNW
7194	15245	A	7867	106	387	
7195	15246	A	7868	2	766	
7196	15247	A	7869	149	420	CGTDKTFWSTVRENLSYSEELLSRR QICKNKNDPPGDRD*FDYSRSDYEHRR GRSYDSSMESNRNRDREKRERERTDR KRSRKSP
7197	15248	A	787	1	462	
7198	15249	A	7870	1	443	GQDSRSRDNGPDGMEPEGVIESNWNEIV DSFDDMNLSESLLRGIYAYGFEKPSAIQQ RAILPCIKGY/DCDLYETLTITQAVIFINTR RKVDWLTEKMHARDFTVSAMHGDMQ KERDVIMREFRSGSSRVLITDILLARGID VQQVSL
7199	15250	A	7871	2	363	ELDTLCDLYEP*PSPSIIFINTRRK/VDWLT EKM HARDFTVSAMHGDMQKERDVIM REFRSGSSRVLITDILLRIGRGGFRGRKG VAINMVTEEDKRTLRIETFYNTSIEEMP LNVADLI
7200	15251	A	7872	3	449	NLQEWKLDLTCDLYETLTITQAVIFINTR RKVDWLTEKMHARDFTVSAMVCLPAA SLLWVCPSEVSYLKPGLPRCLPGLLHI CFLFQHGDMQKERDVIMREFRSGSSRV LITDILLVSRGN**QRQKGGSKVIPSPRG HQCLSGK
7201	15252	A	7873	236	533	
7202	15253	A	7874	1	366	AEIRDRSPCGELHVEREEWKLDLTCDLY ETLTITQAVIFINTRRKVDWLTEKMHAR DFTVSAMHGDMQKERDVIMREFRSGS SRVLITDILLVSRGN**QRQKGGSKVIPS PRGHQCLSGK
7203	15254	A	7875	5	1285	FLRIMSASQDSRSRDNGPDGMEPEGVIES NWNEIVDSFDDMNLSESLLRGIYAYGFE KPSAIQQRAILPCIKGYDVIAQAQSGTGK TATFAISILQQIELDLKATQALVLAPTREL AQQIQKVVMA LGDYM GASCHACIGGTN VRAEVQKLQMEAPHIIVGTPGRVFDMLY RRYLAPKSIRMLVLNEADEMLSRGFKD QIYDIFQKLNSTQVVL SATMPFDVL EVTKKFMRGPURILVKKEELTLEGIRQF LHQPWNEEEWKLD*CDLYETLTITQ AVIFINTRRK/VWDWPHPRKMHARDFT VSRHAMGDMGPKGNETVIMEGSFRSGVS *QSF*LPT*PCWARGIDVPAFSLVINNYD LPTNRIENYIHRUGSTVDRFGRKGVAINM VTEEDKRALRTL GASYN TSIEEMPLNVA ADLI

7204	15255	A	7876	3	378	MDTTPLSYSES*SDEYLVTNM*LQDAFC RGLVKPGLNVLLKGPINAVIDVNGLKQC LA*FKRYLECL*RLDVTLCPPV*IGGSDA PLPHNKDHKAADP*DYFQR*MSFYRQA HAAMLAVLPRHH
7205	15256	A	7877	2	397	RESESCAAADTPALETLSFHGDWEIIEVF NRDLGSTYPDDLAL*MEDVDIEEEEYEE* GYD*GWVLYPQEGVIGNMEGPDYS*VTF ALHSSSVYRVSLDPKTYTLAVTGGYDD GAFVWLLTYG*LLFE*ASHE
7206	15257	A	7878	3	399	NSQVLLDSPIQLSKITENYECITELSGLLK REQSSTVNASNLENDEARLKAYLENRSE IDSLKTSNPIDL*EASISQAGSIN*SRF*SS GMNKSVDVRIDNFNGSIGDRILLTAANVI LAWCRLYGLMRQNV
7207	15258	A	7879	1	424	PVLRVARERSLPGPQEGPHGRASESASPL APSIAPSPGPALSASHIMGSQALRSPET PW*SPWDPPAPLDLVSPWQPPGPHASA TP*RSPLGLQTPQAPGSWAPHPATPQA SGLPAPHVTETP*ASS*LAMPVPETP
7208	15259	A	788	24	452	APSPDAMG/HSLWGKVNVEDAGGETLG RLLVVYPWTQRFFDSFGNLSSASAIMGN PKVKAHGKVLTSLGDAIKHLDDLKGT AQLSELHCDKLHVDPENFKLLGNVLT LAHFGKEFTPEVQASWQKMTGVAS LSSRYH
7209	15260	A	7880	156	312	LFSLACRYHVYPTCRNTSGILGFTVSVVT NAIPFIS*LSSFYIYFLYNFG
7210	15261	A	7881	15	394	FGCLLQGRRLKSHSPWQPGASGRPAQ GKHKNR*RGQNPSNLSHPAPTTPWPGIK CPLPRAGPSLSSLLPGRVLCARPEFPLHG RGLEPSASLLPSALAPSLRGLKGT LKAQAWGGWKE
7211	15262	A	7882	2	102	NKILIKTNSRKK*KIE**RDNNQSNNNKN HNK
7212	15263	A	7883	3	397	NFLYTFLYFPNFV*SAHCF*NQKKKNKY FLLREKCLLNCFPFLYVAFYVYPSIFNLS GC*YLPSCSIFYVFIPLSHPLFFFLCFSLS FSLPFFLSLFCFPFLAFLFHPFILLDSSA CLLCISCFHL
7213	15264	A	7884	190	339	DGKGLLQVCLPLQDVYKIGGIGTVPVGR VETGVLKPGMVVNFAFVNVT
7214	15265	A	7885	377	1073	LQGHRLTGAVLIVAAGVGEFESWYSPR MGRPESMPFLAYTLGVKRLIVGVNKM DSS*PPYSQKRYEIVKEGSTYIKKIGYN PDTVAFVPISGWNGDNMLEPSANMPWF KGWKVTRKDGWASGTTLEALDCILPP TRPT*QSPCGLPSSRDVYKIGG/ILGTV VGPSGRLGVLPKPGMGGSPLAPVNVTE VKICSEMHGGRF*VEALSWGDNVGLSM FQGLLFCSK
7215	15266	A	7886	2	415	SVGDPCPSTASVDQCTIVP*PMEGPLLLY RRCIEGVGGIFLWDPQPSSPQHPGATPST GEPGFVVHQDLSHIQQAADVVAALNN HKPPVRS*PPSATPEAFT*FSKCDDLDEE LSLLRYCHAFSEC*HDIRPSHIHP
7216	15267	A	7887	1	360	TERFGM*GGEAVCLYEVPSELLRRCGN CTRESWVVSFYLSADHELLSPTNYHFLS SPKEAGGLCKAQITAIIFQQGDIFVDLET SAVRPFVWWQVEAPVDYLPCSFVMIPT LYCSP
7217	15268	A	7888	152	378	WEGGGSGTILARRFWDLQAYRPHAQVP GFLR*SHLMAVGHAETDLTALTMLILT PEAWQLHTILYLSGLLAMLP
7218	15269	A	7889	302	564	YWLFDYFMIAEKILNGYFCCCC*DRSCP VAQAGELWHERGSLQPRPPGVKQCSYF SLLSSWDRRHVPPHLANF*TFFCRDRVSP VLP

7219	15270	A	789	38	485	APSPDA\MGHFTTEEDKATT\SLWGKVN V EDAGGETLGRLLVVYPWTQRFFD\SGN LSSASAIMGNP\KVKAHGKKVLTSLGRC HKSTWDDLKGTFAQPDVNCTCDKLHV D\ENFKLLGKCCW*PVFGNPIFGKEFTP EGAELPGQKDG
7220	15271	A	7890	1282	4603	GSLPCLEHVSLNNPLSIIPDYRTKVLAQ FGERASEVCLDDTVTTEKELDTVEVLKA IQKAKEVKSLSNPEKKGEDSRLSAAP CIRPSSSPPTVAPASASLAPQPILSNQGIMF VQEEALASSLSSTDSTPEHQPIAQGCSD SLESIPAGQAASDDL RDVP GAVGGASPE HAEPEVQVVP GSGQIIFLPFTCIGYTATN QDFIQRLSTLIRQAIERQLPAWIEAANQR EEGQGEQEEEEEEEEEDVAE
7221	15272	A	7891	1	286	SPPTVVPASASLPQPILSNQILGDE*VIL VS*ACLLARPARKRGCAVPSGAEARDT QERTPPARAPGDAELGVRSWENSSTRCF KSQKNIPTP
7222	15273	A	7892	3	417	PPPLWFNQDPHVESKGLAAGRVPVSTSQ GRTQFRGSAPPKDPLPRTGPSANRRVP HTFQPDISFPGSPKPPS*DRPHNP SLRSP LVSHSVHNQAGR WAKVQATARERKSDT KSIWLWRWRRILKRTRSNSLYTLHG
7223	15274	A	7893	2	236	KKSNLRMLAEHGGSHL*SQLCRRLRQEN HLISGGGGCSESTSHHCTPAWGTE*DFVS EKKKKKLTGWDPDSGRKWWC
7224	15275	A	7894	3	254	LECNGTISAHCNLRMLVSG*FSRLSLPSS *DYRRPRLRPANFCILVEMGFHHVGGAG LKLQTSGLPLSLPKCWDYRRAHPLA
7225	15276	A	7895	1	185	RQSLALSPRLECSGAIIAHCSLEPLGLRQL CCLSLPKC*DYRHEPLSLACFLFYYPEH LT
7226	15277	A	7896	1	182	KLVGLEPVSTYSIRVSAFTIVGNQFSN VVKFTTQESG*IQFLSLKCFFLYLTFFSF S
7227	15278	A	7897	4	329	AGEGGLQALILRDGAWPQPSGD*QVKG LEPLTPAPAGSSQGPGPPPIASSPVGQS KTDATTTKVGPVGGGQPAPMHQQLPP SPGDPAEDAHTWGERSLSGMKGK
7228	15279	A	7898	115	408	HWKERGSLYPA*TQGSACVLPGQGHL RPQATPPTTAHLVPPQHCRPPGAAPAP* QGMSTPTTATLFSRLQGRQLPMGAPSG QGPWLYCRGEGPRA
7229	15280	C	7899	128	253	MNSPDWELWQDNQDSCVLIPTCDH AASRGRDSSGVIE*
7230	15281	A	79	421	899	IASLFLIVKVEEVSQTAIWKKKKCDEYIP GTTSLGMSVFNLNAIMGSGILGLAFAL ANTGILLFLVLLTSVTLLSIYNLLICSK ETGCMVYEKLGEQVFGPQGFVIFGAT SLQNTGGKKNMLFFT*LEYTHTSFFSK WLFVRLLLLSRSEINLLFI
7231	15282	C	790	128	274	
7232	15283	A	7900	856	1071	SFALVAQAGVQWHDLGSLQPLPPRFK*F SHLSLPSSWDFRCPEPYWLIFVFLVETGF HHVDQAGLELLTSGD
7233	15284	A	7901	87	395	RSGGGVPPRNPPLGGRGGGFGPGGFQI TLSPKKGKPLFFLKSQNFPG*WAPPLKPPF KGG*TKKIFLTLEGGVPINGNFPPPPPGG KNFSSKKKKKKKKK
7234	15285	A	7902	28	403	GGTIYGNCVVPATVPAGSPGVPVGGQP GPLPVL*RTSPETCPPLGVTTGSLCLAPY HLSFGGHGLPGTPREAG*REGGNSLQL QLPNPKPFLPSRPEDPTWSPSSQGEELRR RKVRCDLKSILT

7235	15286	A	7904	1	609	SHKTNVQQCYCYCGPGDWYLMQLQC CKCKQWFHEACVQCLQKPMFLGDRFYT FICSVCSGPDYALKRPLQWVDIAHLCL YNLSVIHKKKYFDSELELMTYINENWD RLHPGELADTPKSERYEHVLEALNDYK TMFMSGKEIKKKVHLFGLNRVPPVPPN VAFKAEKEPEGTSHEFKLGRKASKPIS DSREVSNGI
7236	15287	A	7905	440	608	CVKLFLDTSQADTPKSERYEHVLEALN DYKTM*VDLFYVSL*GRHLVSIRNNGIV
7237	15288	A	7906	49	796	SHFIYFLTIWISLVNEVC*SSPFLMNLQ VVLVYFWLLLLYELCCRIFSHFVVCFLTM FINIVTF*F*YLOITVFLYG*LGFFYGYVK NIVNILLHAL*FCLSHFGFIPLGTIFNI*Y EVIFLL*G*SVVPALFIEKKQKQKTFLL LL*SAFSVVYWQYMQRSFMGSLLYWFF SCANVHSLHYFMIFKKIFDI*YQSPFTSL FINSLWFLVLCSSLYILEIAYHVSLLKAE HIENLIGVAMNL
7238	15289	A	7907	178	565	KGGATCPESPQDRKRRGNLMEKLYSE NEGMASNHGKMENE*QPQDQRKPQVTL YSGRQEVRRKRGKDRKQGNRR*GNV*R IKGKPESEGEAKEGKSEREGESEMEGGS EREGKPEIEGKPESEGEPE
7239	15290	A	7908	3	413	VTGVLVYLAVERLISGDYIEDGGTMLST SGCAEAENIMG*TLHQSGHGHSHGTTN Q*EENPSVRAVFIHVIGDFMQSMGVLVA AYILYFKPEYKYVDPICTFVFSILRLGTTL TILRDVILVLMEGTPQGVYFTAV
7240	15291	A	7909	119	427	LESLSHKRSSPRHIVIRLSKAKTKKSVLR AVRQKYQITYKRTPISLSVDCSAQTLQA RRDLGPTFCLLKNNNQPIILYPVK*SFIN EGKIVFFREISPERIC
7241	15292	B	791	72	524	LPAPPGRIKRADLATRPSKVIRVRRGGRK RPVPGATLRKPVHHGVNQLKFARSLQS VAERAGRHCALRVLSYWVGEDSTY QWITKPVHKKHREMRGLTSAGRKSRLG KGHKFHHTIGCLAGQLGEGAILSSSTVTA NISKVCKIHT*
7242	15293	A	7910	13	235	DLINKISKAAGYKINTEKSVAFLYTNSNQ TEKEIKKAIPFTITTKNKTLYGINLTKEV *ELYQENFETLMKGI
7243	15294	A	7911	39	141	LSIRGLNIIKRQRL*DWIKQDSTLCCP* EIH
7244	15295	A	7912	1	285	QQRPPGLRPPHPRGQDQLWLGKGWG AAQL*EGPSGSRGRGVERERGRRRKGR KGRA*RGTRKAGGEGRRRETALASPLRG HRSPQERPRPTL
7245	15296	A	7913	1	452	TAKTTFFRNAHSHKLS*NVCKPVEETQR PPTLQEIQQIDSYNTRKNCLGMKLRE DGTYTGFIVHLKLRRPGTVPAIRPQSI YDAIKEANLAVTTDKRTSFYLPDAIKQ LHISSTTVSEGIQGLVKKFNGVDNPQKV ALFKRIHK
7246	15297	A	7914	1	484	NVLCGNNQISDLGILLPEVCMAPEEKGD KDDQLNKETEDYLSLFEGLKVTEDSL SYEDNQDDSDLLQDLSPEEASYSLOEN LPSECLSLDDAKRIEIAEVVPTGLV SILKKRNDTVGDHPAQMQHKPSKRRVR FQEIDSLDQESLGFGDGAL

7247	15298	A	7915	2	1121	HYATDRFPFVRILLYYTYSYVPSFPS YTKCCFEFLTIYFSSSLESKTCLGTESSKE SQHTVEPLGSSPCCHQMDVQTDSPSLSV TAGKDHMEELCSAEATLALHTQSSETA GSPSGPDSSEDACEDDSRLQLAQTEACQ DVARIEGIAEDPKVFLSSKSKEPLISPGC DRIPPALISEGKYSQAQRKELRLPLRDAS EALPTDQLENNELNELQQPDLTDSGKS PQAQADSNNGSENVLCGNNQISDLGILLPE VCMAPEEKGDQDDQLNKETEDYLNSSL KGCLKDTEDSLSEYEDNQDDSDLLQDLS PEEASYSLQENLPSECSLSDDLAKRIEI AEVNQR*STIKSKMAFKKHYYVLNIALFL
7248	15299	A	7916	2	390	SDSRETRVVINKDSVFCLYCKLFGGK NQVKNENGCKDWQHLSHILSKHEESEM HINNSVKYSLKSDLKKNKAIDAAERRL YENEEK*WCAVVVHVLYLSCFLGMMIR NLTLRLKTSVLAIVSTIVL
7249	15300	A	7917	1	240	KRGEKAPETSKTTSTWRIPCRKRRLSNR DFPDLSTGEELPETCGSCLRRGSGREN*D AETWPAQCPECESKAAVSTRFLF
7250	15301	A	7918	3	420	EPLSSPLFCP*NQSKIHPPIFLAPTWPHP HHFPPGPGQPPFPLSTGSHLV*QKPKGA HEHLSGIPPSLAQNPTWVPPHPGKRSSPH SATRPCKICPRLAPSTLLTPSNLTGP*PL LPGALPGLGPPENFCTGCFL
7251	15302	A	7919	2	127	RFWDYGRIALVS*ADSESRFQRLSSTSS GQQDFENELVGI
7252	15303	C	792	56	289	MNFTNFTYISGSGGAGEYCAFSKLPGES HRIVWWNLWPFPRRLLSACRCQPQRH LPCALWELVLVNPTGCSRISSE*
7253	15304	A	7920	1	346	DSRSPSPASPPTQ*CRPSSFPGPAPPRLW LAPPFCPPPPHGYGPFPAKRRGAALGL TRVLPPGSAVRRSPGPGPSAWDKTLK MKQKKFGRSVGLWRELIRDCSLAELLSA
7254	15305	A	7921	184	291	
7255	15306	A	7922	481	716	VFFFFFFETECRSIAQAGV*CSLRLPPPGSS DSRASVSRVAGIVGACHHAQLIFVVA MGFHHVGEAGLEHLTSSDLP
7256	15307	A	7923	4	423	VARERRLPGPQEGPHGRAAGSASPLAPSI APSPPGPPALPASHILGSQALPSPETPW*S PWDPPAPLALVSPWQFPFGPPAPATP*RS PLGLQTPQAPGSWAPPVPATPQASGLPA PHVPETPWASS*LALPVPETPWDL
7257	15308	A	7924	3	436	GYLSEVVEENTPPKMEKEGLEIMIGKKK GIQGHYNSCYLDSTLFCFAFSSVLDTVL LRPKEKNDVEYYSETQELLRTEIVNPLRI YGYVCATKIMKLRLKILEKVEAASGFTSE EKD/PAGQKVQDCYFYQIFMEKNEKVG VPTIQ
7258	15309	A	7925	3	187	VLAGLELEDECAGCTDGTFRGTRYFTCA LKKALFVKLSCRPDSEFALLQPVSNQIE RCNSLAFGGYLSEVVEENTPPKMEKEGL EIMIGKKKGIQGHYNSCYLDSTLFCFAF SSVLDTVLLRPKEKNDVEYYSETQELLR TEIVNPLRLIN*YCSRFPRLSAVTL
7259	15310	A	7926	4	343	KLEN*KMVLKEIKEDLNKQTDILFS*LQR LITVRMSILPKLIYKFSAPPIQIPA*FL*IKIII KCMRKGK*TRIAETASSSSSPQSFILSPK LDHRGGITANCTPPWAIGKLL
7260	15311	A	7927	1	531	FYHADHAALKDEMTEY*VFLQIKRYLY HGRLLCKHPDAALLAAYIIQAEIGNHDS G*HPEGYSSKFQFFPKHSEKLERKIAEIH KTELSGQTPATSELNFLRKAQTLETYGV DPHPCKDVSGNAAFLAFTPFGFVVLQGN KRVHFIKWNEVTKLFEGKTFYLYVSQK KKGIGSCP

7261	15312	A	7928	115	348	KSCLNIFGLKQTTSSLRWNRVKK*AHTY G*QLIFNKGAKIIHWIKYNPANGICYWISI CKKVNLDPYLIPYTHIQNGS
7262	15313	A	7929	4	430	AWLSALNSSLPATWSCCPSLGASHKLQ WEATSPTVPPRAPSQVKCAACEPTPTLP CLPFQPPPSLSSQAQVLLTGHPG*GPLR RQGEGLLRSGCQARLTQPNSEGGAV S*TRPGDGAUGEAAPEPTRRDCPTAPP AS
7263	15314	A	793	24	452	APSPDAMG/HSLWGKVNVEDAGGETLG RLLVVYPWTQRFFDSFGNLSASAIMGN PKVKAHGKKVLTSLGDAIKHLLDLKGT AQLSELHCDKLHVDPENFKLLGNVLT LAIHFGKEFTPEVQASWQKMTGVASA LSSRYH
7264	15315	A	7930	1	380	GTRLLVRYTPKEPQVWPTTFVEVFGDLG QVGPE*C*HPEAKRMPCAQDYL SVVLN QLCVLYEKTPLSDRDTKCCTESLVNRRP CFSALEGDEAYDPQELNAETLTFHADICT LSEKERQIYKQTVL
7265	15316	A	7931	2	388	NVQKSLAFLYTNN SQVESQIRNAIPFPA TKRIKYLGIPLTREV KGLYENYKTLKE FREDPNKWKNFPCSWVGRINIKMAMLS KAM*RFPRVHIKIPGTFFTELGPILKFTW NQKRAQIPRATRA
7266	15317	A	7932	72	373	TSTLKKLEEKQTQSRKEIKIPAEINAIEN KQIEKISKTKSCSF*K*SIKITNP*LKQ*TKE KI*INNIKNRGQVTMAFVAIKRISREYC Q*LYTNKFNI
7267	15318	A	7933	2	259	KQWKPAPPGPANPLPRGTSGPE*KGPHS DKAKPFSFFKKRQWGGAPSRSKKARG KGQPPKGGHLKGPLRVVNGV*RAPLNR TAA
7268	15319	A	7934	3	335	QIKPPRLRDTPHSFTPYHPVRRGLVYFPS APSPAKGEQLHTRTRHNVLGSHPRRLP RSS*SSHRVTRGSLGSVPPARSTSYGPSR QWDLACPLTPEGVWRTKNNKPEAL
7269	15320	A	7935	37	281	GPSPYTDPTPTYP*LTLNLTNPRTNSTLPP TLHLPSRPTPSSPSTSLPPLVLRFFLKIQ SGKRRAYPEHFWGQNGERKV
7270	15321	A	7936	13	234	DLINKISKAAGYKINTEKSVAFLYTNSNQ TEKEIKKAIPFTTTTKNKTLYGINLTKEV *ELYQENFETLMKGI
7271	15322	A	7937	3	426	VLEELPISVLFNSSVPAWQWLAHVYHS HGMMRAAQMCYIKTLQLASQRRSWSWA KLSSLWRLALLALKGCMANISNDYWPS LVQEATTEALKLCFCPLAVLLLALLQFK RKMVST*TLCLLERVVYHPGSKFIGSN WPAV
7272	15323	A	7938	132	393	ETNSLFGPQVKROGNDLG*LNPPPRGFK KFSGLTLRRSGNYRPSPPRVFG*GKRGL NWWAKGGDLLS*NNPPWPSSQGARIM GES
7273	15324	C	7939	170	394	
7274	15325	A	794	38	604	APSPDAIMGHFTEEDKATITSLWCKVNV EDAGGETLGRLLVVYPWTQRFFDSFGN LSSASAIMGNPKVKAHGKKVLTSLGD AIKHLDDLKGVTFAQA*SELHCDKAAM WIPENFKLLGNVLTFRFGQSHFRQKNF TPEGCKASWAERWVTCSPVALFLQDT TEAQLPMNAELFKDKAFILASNYK
7275	15326	A	7940	107	379	PPFVAQLGGKGGNLG*LNPPPRG*RGFSS LGPPISGNYGPPPSRVIFGLRKKGVSPS GPGGFGIPDLKIGPFNPPKGLG*RGGPWG PNQ

7276	15327	A	7941	83	409	PEIISGFFFDHHGKLETPKRNFGNYPNT WKLSNTLLNDQGVIEGSSSLKWLKTN EKGNTYQSL*DTAKAVLKGNLTAISAYI KNREKLQINKQCIFNYPEKQEQM
7277	15328	A	7942	15	334	QHFWEFHVTKDRINTGERQETDWKIFA TYLMKKV*ISRKCYSYKLVKQKQNR KWAKEKNKQSQKKQSGQ*TKTVQPQ* NKRNAD*RYLSPISLAKSNKLN
7278	15329	A	7943	1	400	ESRLICQQMYMGEKPFGCSCCEKAFSNK SYLLVHQQTTHAEKPYGCNECGKDFSSK SYLVHQRIHTGEKLHECSECRKTFSFHS QLVIHQRIHTGENPYECCECGKVFSTRIDQ LVSHQKTHS*QKPYVCNEW
7279	15330	A	7944	46	364	SHLPNSSFEQKYAYEFVPGYQKHYYLSK FPWPFFAEMEKLILKFKWKS*SHITEAIL RRKNKVGDLTLSQVSSSL*RYDNQLLSV *Y*YKHRRIGPWDHGRPDHIL
7280	15331	A	7945	3	312	VCPCSQLNKAITSTTRCLRGFVCSSSCYR RRARERGMKQTOQRERQR*RRERQR GEERQGGKREPHSRARGGGSRERER VREL*SDSDRSLEREALLR
7281	15332	A	7946	225	720	GLAHSVRHSSFWGHLQDSGLVPPGA GQGSGLGLAAEWVGKASWPWPACPT PHSEALVCSFRTSPSTPHAHGPGVSGPA SVLAALRLGLHLRGCGGGTPTSPQTLQ DEEAN*GHRGHGDRLLRLTQAPTAQPL WHRPWQKDWPNLPRPLSFWCRPPRP
7282	15333	A	7947	43	418	AYWGRKTPWLTISFVPTGSPYYDNGR PLCYSDSAVLLCFDISRPETGDSALKKV RLDQLSNL*LSMRKKESGPCHECLLTS RNGSQGRKRFAQHTISYSSGTGTWVSL PHCLPPFLLSH
7283	15334	A	7948	2	221	AGPGGSPHGYVGSPLRISTRHLCAATR SLLHIDPLIVLPLVDLKDRII*NLWGLQP LPPASLLQPTALYS
7284	15335	A	7949	1	409	SPGTCGRRPQTM/PPGAPDFPAVEGRSLG LSPSQGGPAGAGGDAGQEDVRQPPGEL AHGPLLPAQTG/SPGPQGLWLHRNPTS/G PPSQIGEGAEQDEGVADAPQIQCKNVL KIRRRKMNNHKKYRKLVKKTRFLRRKV
7285	15336	A	795	23	153	
7286	15337	A	7950	2	361	YSTSPAGQVGRGPSQGGPAGAGGDAGP QEDVRQPPG/EAGSRPAASCPDWIPG/AA GHVAPPQSYQCPSQIGEGPGGTPTQTA DQVRERPEAHLAEGGAKGSPRRAGRPPR STCGANESG
7287	15338	A	7951	337	1067	NLKAHPRRPFNPPLASGPFPLLAGADTW *GIGGWKPTSSLRVPGIQSGAGSERGREP SSPGG*RTSSWGPASPPAPAGPPCEGERP RLPGPAGDVL*RETADPAAQHSRQAK AGGRLPKERPSTAGKSGAPGAWSVGGG HRSQGSSTRKLTLVLRPPSGTSGSPSRP RSAAATRRFLRTAPAGVLAAPDSALAQA PPGPKGDGFRGCGPWYTPQVQNRFRITQ GPDSQRADGSAGSRLRK
7288	15339	A	7952	127	440	SLRYTFLYTFPILEHIIVLMQQTCLHGF SIYLLIHTFILQHPFHTLFQQTCSIIQLY FLV*YFAYVYTFILYLSYFPLYYY*AC FETFDSFNEIGRV
7289	15340	A	7953	2	341	
7290	15341	A	7954	288	802	GVIMATSELSCVESENCERREAFWAEW KDLTLSTR/AEREGCSLHEEDTQRHETYH HQGGQVLAQRSPWLMRMGILGRGL QEYQLPYQVPLPLIFTAKMGATNEER EDTPIQLQELLALETALGGQVDRQEVA ETKQLPPVVPVSKPGALRRSLRSMSQE AQRG

7291	15342	A	7955	72	488	HEAGSRMNGDHNDSVFSQD*QDFVQHF CQIGRVLTEDEMGHPEIGDAIARLKEVLE YNAIGGKYNRGLTVVVAFRELVEPRKQ DADSLQRAWTVGWCVE/ADDIMDSSLT RRGQICWYQKPGVGLDAINDANLLEACI YR
7292	15343	A	7956	1	236	GTRVVAFRELVEPRKQDADSLQRAWTV GWCVELVRGVGQGRSFLQWW*LGWE GEGWA*NLFLGCVCVSLSLVCYGGI
7293	15344	A	7957	317	1395	TGDQNSDVYAQEKQDFVQHFQIVRVL TEDEMGHPEIGDAIARLKEVLAEYNAIGG KYNRGLTVVVAFRELVEPRKQDA/DSL PAGPWTVG\WCVELLQAFVLVADDIMD SSLTPPGNRSCWYQKPGVGLDAINDGN LLAEACIYRLKLYCREQPYLNLNELFL QSSYQTEIGQTLDLLTAPP/QGNVDLSEF TEKRYKSIVKYKTAFYSFYLPAAAA MYM AGIDGEKEHANAKKILLEMGEFFQIQQD YLDLFGDPSVTGKIGTDIQDNKCSWL VV QCLQRATPEQYQILKENYGQKEAEKVA RVKALYEELDPAVFLQYEEDSYSHIMA LIEQYAAPLPPAVFLGLARKIYKRRK
7294	15345	A	7958	3	484	ETPVPATSAAIRILVLLPSLRVTSPGRQGP SVDRVVFPPFKFRPERSRHAAGPNVVR PQPKPHEVGGERRGRPNAPANSFRSCSN LSPQYSLPKQNKSSNP*IPNKPTPPASPS GRTDGLSLLQPLPGSDGQASPTMRSSPAI SSALEIEFGKTNPFH
7295	15346	A	7959	3	432	SGSSRPRGSAQPRPGPGACGMAAPTSE*S SPPAWQPRPPCGGLHHCPACVHPRDSG GSVPAPAACCHTPHGRPWFEGQRPQT QPQPQGPWVRPVLTTFAGRVASVPLVS LCAWASGSQPGPPSGGSGRALCTGLGAP PA
7296	15347	A	796	84	358	APRADAMGHFTEEDKATITSLWGKANV EDAGGEALGRLLVVYPWTQRFFDSF/GQ LSELHCDKLHVDPENFKLLGNVLVTRFA IHFRKEFTPE
7297	15348	A	7960	2	331	VCKLQPQPLPAHSGSPNIHISQLCPSHAW GLLVSSGCVTLRESFFLCFALVLQRKS SSLGILSCPGSIFTALNSTNL YILGFLGGF CLVFF*DRVSLCHPGWSEVVQS
7298	15349	A	7961	25	364	LFYLYHLLFFGFLFLFLIKLGSSLFINFS KKSVL*FTNWIYFSVLYFTDFCFIHISFFG FSLIYFIIVGFPLKFIGFILSFI*ITVFYQQA QWLTPIVIPILWVAEVRGSL
7299	15350	A	7962	174	469	NGPP*KKKFFLSIPRKIWAAPPFFF*/EGPPL FFFFFLTESCSVA*PGMRWHNPGLLQPL PSGFKQFSCSLSPSSWDYRCPLPHPANFF VVVFLVETEFC
7300	15351	A	7963	65	2774	
7301	15352	A	7964	243	687	PHPIPHSEENFEFLIVSSTGQTWHEAASF EERDAWVQAIESQILASLQCESSKVKV RV*GGVEDWPQELTLVLTAGNDTAEVV *EESRGV*EGGGAWRQSQCQPQPSLQLR TDSQSEAVAIQAIRNAKGN SICAHASAD AWVEA
7302	15353	A	7965	3	368	PSDPEVAGDPIFPFGPPSCPEVKDKTKSSI SLGWKPPAKDGGSPIKGYIV*MQEETT DWKRVNEPYKLITTWECGGPNLKELRK YRFRVKAVNEAGESEPRDTTGEIPATDIQ EEPEVFID
7303	15354	A	7966	3	78	FKIQNLIASTVRTVMVADCSRFDSPDLLL EAGDPATSPCRIFDLGSDNEEVVAIPDPS HPKEGLSYSLSCVLLGRSLPRCLISCIYPL CLSVASGPHKFY*PHCQHRPHGDGGRLO PLRQP

7304	15355	A	7967	195	345	NDISANPAIKKFWKLPKCPTEGWLNT* LYIHLVEYYATLKVCGDLYVR
7305	15356	A	7968	2	801	WRNSADVWVWYCGGPLLDTLPSNWSGT CTLVQFAIPFALAFLOPEKEKPQHRKIRE APYGSFDSQVYLDATGVPQGVPHKFA QDQIAAGFESIFWVVTISKIDWINYIYY NQQRFINYTRDAVKGIAEQLGPTSQMA WENRMALDMILAKKGGVCVMIKTQCCT FIPNNTAPSGSITRALQGLTALSNEAKN SGVNDPFGSWLERWFGKWKGILASILTSL AARIGVVILFGC*VTPCIRGLVQRLIETVL TKTSLSPPPYSD
7306	15357	A	7969	113	362	WLHAPECFSQCPSQSPS*LGCQGPESDP DPRSVVGPPLSQAGSPGRPGGTVITLCL WPHLAPLFLWSPGKCTSLLVQHS
7307	15358	A	797	1	428	
7308	15359	A	7970	1	955	MTQPFNYSAFERIIFAGSPGHTVFSERSL LVRPRSHPEPKGEHYVTGSPTPENQRTS AAMSKPHSEAGTAFIQTQQLHAAMADT FLEHMCRLDIDSPP/RRPLPATPQKPPW VPWRPSSAAVGP*SSPSLADVKSQVL VTCLACHCHWQREEWVLVTLGQGCLS VSEFRV
7309	15360	A	7971	113	716	RSLGPCQHSWQSSPGGPRPQPRPPLGP CTAQGRCHGTGGPDE/TVWGFRTVAMM GARGRYL/AHLVSRLEMGWGSYIRVHFT RPQEVPSGRSNSSPSHPAQ*GLWPLQHLL RRTPPEARAAHPHISPSAC*VTICLPPFH RPRDQDHLAPARSASPTVPPQPMVGRTP PTP*TLTQRGSPGPMSPAPIPLAANDSDK PSST
7310	15361	A	7972	244	1510	KFPKKTPPHLGMEAITLWQFLQLLL DQKHEHLICWTSNDGEFKLLKAEVAKL WGLRKNKTNMNYDKLSRALRYYYDKN IIKKVIGQKFVYKFVSFPEILKMDPHAVEI SRESLLQDSDCKVSPEGREAHKHGLAV LRSTSRNEYIHSGLYSSFTINSLENPPDAF KAIKREKLEPPEDSPPVEEVRTVIRFVT NKTDKHVTRPVVSLPSTSEAAAASAFLA SSVSAKISSMLPNAASISSASPFSSRSPSL SPKSPLPSEHRSLEAACHDSLEPLN LSSGSKTKSPSLPKAKKPKGLEISAPPL VLSGTDIGSIALNSPALPSGSLTPAFFTAQ TPNGLLL\TPS\PLL\SSIHFWGSL*SKFVP LSPARLQGPSTLFQFPTLLNGHMPVPIPS LDRAASPVLLSSNSQKS
7311	15362	A	7973	1	1230	
7312	15363	A	7974	3	358	LPAPGARPEWLLFPAPVVGVLWCWTPQS IISLHFFLNVPVGTLSSSSSSSSP*RT*LP MTLS*VGAVSGFKPISRPEPHSGHNSPS LSQPSLTILVSSNSPGSGKARGPQCQAW L
7313	15364	A	7975	194	372	LFG*LKAPPPGLKQFSGLSLRRSGNYGPP PPPPVYFFVFLKKNGFPLVTQGGLNLRT WG
7314	15365	C	7976	238	459	
7315	15366	A	7977	1	505	AGGAGEETPHQESQRQGCALPQEPLYP PCPAIHPPPLPLGGLLLFPSLPSLALSCMV PPPWAAQEGI*MENHQPEKKRLWGPPP ANSFPARPLNPHLFQAGTGCPPCPREVP TPSPWAEPPPLGPPSEIAHLTTVRRGA ALANVNHENISDTDENKLNAFVTA
7316	15367	A	7978	39	141	LSIRGLNIIKRQRL*DWIKQDSTLCCP* EIH

7317	15368	A	7979	8	532	FNYLLKFJIRPPHAFQMFPMSQKQEG PETAESLSHHGCLSL*R*EISWAPPTCG AFPSSAATLGASPVLGASVPLGAAGMQR GRRGHRIPGDTWGLLLPGAGGTDAESPA HNWEP*TSVPPSRPGHPSGPSAGLQSGRP PL*GDCEWGRKAGKGHAY*VPGPELHT LPLSDP
7318	15369	A	798	2	476	VNVEDAGGETLGRLLVVYPWTQRFFDS FGNLSSASAIMGNPKVKAHGKKVLTSLG D/ASSASAIMGNPKVKAHGKKVLTSLGD AIKHLDDLKGTFAQLSELHCDKLHVDPE NFKLLGNVLVTVAIHFGKEFTPEVQAS WQKMAEDVTGVASALSSRYH
7319	15370	A	7980	1	9786	
7320	15371	A	7981	27	13822	VPFSVAAAEPAQPARAARPRPGRSPGA APPQLAMDPPRPALLALLPALLLLLL AGARAEEMLENVSLVCPKDATRFXHL RKTYTYNYEAESSGVPGTADRSATRIN CKVELEVQQLCSFILKTSQCILKEYVGFN PEGKALLKKTKNSEEFAAAMSRYELKLA IPEGKQVFLYPEKDEPTYILNIKRGIISALL VPPETEEAKQVLFLDTVYGNCSTHFTVK TRKGNVATEISTERDLGQCDRFKPIRTG
7321	15372	A	7982	40	400	ELFGHIALQTIAYSILWDLKFLMRNLALG GGLLLLLAESRSEGKSMFAGLMMFTLL HFDASFFSIVQNVGTALMILVAIGFKTK LAALTLVVWLFAINVYFNAFWTIPVYKP MHDFLKY
7322	15373	A	7983	1	900	FRAAGAGADGREPASERASRAEPPAVA MGQNDLMGMAEDFADQFLRVTKQYLP HVARLCLISTFLEDGIRMWFQWSEQRDY IDTTWNCGYLLASSFVFLNLLGQLTGCV LVLSRNFVQYACFLGFIHFLYTIAYSIL WDLKFLMRNLALGGGLLLLLAESRSEG KSMFAGVPTMRESSPKQYMLGGRVLL VLMFMTLLHFDASFLFLVQNVGTAL MNLVAIGFKTKLAALTLVVWLFAINVY FNAFWTIPVYKPMHDFLKYDFQTMVS IGGLLLVVALGPGGVSMDEKKKEW
7323	15374	A	7984	2	397	GRVGRPTRPPTRPPTRPTRSSSSSSSSSS SSSSSSSSSSSSSSSSSSSSSSSSSSSSSS SSSSSSSSSSSSSSSSSSSSSSSSSSSSG PFFGVSPCVPEILKSSSPRIGCPRN*APPFK RGNL
7324	15375	A	7985	5	230	IGNFKNVFSIVNITTRQNTSTDIENLKNNT HV*NTVSNS*YTVFSSACGFTFKISHLLR H*TSLDKF*KLDVLWS
7325	15376	A	7986	1	366	NPSIVGGQDLCKGNYKTQIKDLLADGSS SSSSSSSSSSSSSSSSSSSSSSSSSPAGPM KTPTSFLIELGKTIVQFL*NQKRV*ITKVIL SKKPQKTENKTKLEAFHSTLCYLP SNYA TRL
7326	15377	A	7987	3	361	ISKKKFFLKGFFFLGF*KKPPFFPPPPPP G*RGKKKIFFFFWVKKNPLEKNFFSLFLK KGGPPTPPGGFFFKKKRAPQGGGPPKI FFFFFFFFFFFFFFFFGDGVLLCCPGWSAV
7327	15378	A	7988	2	359	GLPS*HYSPPQLPH*SHSHTIAPKAEEKA NRKETHFSRSPQQISGRCPQDKSLAKV DFLDQLRPMVGHSLGRGPHLPKHMP PEQIQEEPEAHHLPLVCEQLPLLPWEDF VYGSSR
7328	15379	A	7989	490	583	NH*SPMFGYCICVCFETESCSVAQAGVQ WYNRGSLLQPLPGPKGFVCLSLPSSWDY RRRPP
7329	15380	A	799	23	349	
7330	15381	A	7990	1	129	QPGPEGKIRFFLKIPNLTPSGGKSLKFPLF KRVKPENCLSLRG*GCN*PGPEGKIRFFL KIPNLTPSGGKSLKFPLFKRVKPENCLSL

					RG
7331	15382	C	7991	96	380
7332	15383	A	7992	202	499
					ILGFVQWHDHSSPQPKTPGLKQSSCLNF LSS*DNRHMPPLANFFIFVEMGSCYVA QACLELLGSSNPLASVSQNAIGTMSQC TQLFLLLLNRFPAL
7333	15384	A	7993	1	206
					NSSVFLHLQALGIPLHLAYVSVPPTPG* GSGHGRSLLSISVGQGLPPQRPSPASPFH LDIIHQGPAPW
7334	15385	A	7994	2	349
					TCHRRKRRNPRHGEVGLGYPTDESAPP SAPALGPGEPRVPGSSSGRASGH*WYPN AVESP*EEGEL*GRRGETLVAEKKKKPR HGEVGPSPMEKKCLPISP*AGPRGPRRP WF
7335	15386	A	7995	269	364
					GHLSAIGHPPF*MSFNHGRKTRTWNYLG SEEQ
7336	15387	A	7996	1	314
					PSRSFISNH*PHQDV*PRFFNGIHL*YSHT PGINHVEPEPNSTRSKACWEGFGSSNSG NGSFLGAR*VDVQEVLTITWRVIRVWN* CFGRNSAPMAQSKSSSES
7337	15388	A	7997	65	354
					YFYIYSIYHFIAPPYFSLVFLHLVCPYL SSFLSR*KIHVCLKDFKVNFS*TIPKLSKL LLELESISLFFL*NVDFILEILPLYSAILK RVYF
7338	15389	A	7998	1	957
7339	15390	A	7999	97	4146
7340	15391	A	8	190	383
					TRMIHITSVYSHPHQAQLRGCEVLRHKA HLVLP/WSTSCSGIPRGQQTAAQGGYSR CFLAWSLEA
7341	15392	A	80	44	377
					TFFLYLENLNTAVRFWKLPYIHCFKNPG GAGLICIAPWLTKAFVFGSDYSCLVTVR VK*VFKPFLKDVEIRR/FTWTIRQPWDAV FLRVPDYHALIKQPMDETDMRLANS
7342	15393	A	800	17	535
					APSPDAMGHFTEEDKATTTSLWGKVNVE DAGGETLGRLLVVYPWTQRFDSFGNLS SASAIMGNPKVKAHGKKVLTSLGDATK HLDDLKGTFAQLSELHCNKLDDLKGT AQLSELHCDKLHVDPENFKLLGNVLVT LAHFGKEFTPEVQASWQKMVTGVASA LSSRYH
7343	15394	A	8000	97	2728
7344	15395	A	8001	1	2295
7345	15396	A	8002	97	4027
					EKEPYEEISAEADREPQQLQNYWSEVRY TVRCIYRQAGTPLADDQDQSLVPDKEGV KELVDRLCERDPYQLYQRLEQQAREYV LEMKVRLRLQLSAAAKVKAPSGLQGGP QAHQFISLLLEEGALCQAARSISTFLGT LENEHLKKFQVTWELHNKHLFENLVFSE PLLQSNLPALVSQIRLGTTHDTCSEDY STLLQRYQRSEELRRVAEEWLECQKRI DAYVDEQMTMKTQRMLETEDWELFKQ RRFIE
7346	15397	A	8003	1	450
					GVPYKRHIEGF*PGLNGPLKFNGPSSSS SDGLRLFGSGGGQSPNWVPLGSYQGR SRPVPPGGSSAEPFPPSPASGGTHVPQLR ALPPLHGHSAAPHLSLALTVPPPVRT L*GHWGPGPPTLDAPPSPSHLQVPLSSQG GIPPHWT
7347	15398	A	8004	16	303
					GENPLMRWPEALPGVFKTCFSPT*GYG GGLMFLCHHADSINFSAFQPINNADFIVP IEIEGTHQVSCQPDHTQPRGWGVCLLP HLYWGPPPIG

7348	15399	A	8005	146	808	RIFSLCSAALSCKKHGNPQDCSRRAPGNV PAAISRAPSLVLGLRARTVTRKGGLRPR KGEQGPIPSDPAVKGPGAEPGQARFAP VYQILIGAPRWEPLLSTGGYTVSGSSPVV EVGTRANQPRQ*ALPASHLPLASRSSSS SHLYTAAPPLVSRGSGGSAGRALDSSFP QHSLAKPRPSAGLEAPGHWGRTGGDRR RKGTGGEPHTFAEVEALPASARP
7349	15400	A	8006	111	369	FGPGPPL*SPLF*GSSSSHSGVGK*NPSFL PGGTPVFFKNPKFPPPWGGPPVSPLFWG GETGNWGNPGGGTLEGPGYPPLALPGG K
7350	15401	A	8007	85	394	DWRRRRRDSRSS*REDCQSTTYVRKRAK SNCWCWSKEKSKSHERDSIPRIEEKRMR SRSKGRDHENVKEKEKQSDSIGNDQEGS RSREKSNQFDSKSNERDH
7351	15402	A	8008	2	2255	
7352	15403	A	8009	1	1845	
7353	15404	A	801	17	533	
7354	15405	A	8010	12	450	SEPP*ITSVDPRVRGNASTGYGKIWLDDV SCDGEDSLWSCRNSGWGNNDCSHSED VGVICSDASDMELRLVGGSSRCAGKVE VNVQGAVGILCANGWGMNIAEVVCRQL ECGSAIRVSREPHFTERTLHILMSNSGCT GGEASLW
7355	15406	A	8011	121	342	QNESVVHMKTFILAVFKLPLKIRQIKCIYI FYN*ELKLYSVILKYFFLYDFRPVCLVLS EIPFMSTWFLLVSTFR
7356	15407	A	8012	3	383	EKGPLSPKVLFNHLCQKAPRFKDFQQQD SQELLHYLLDAGRTE*TKRIQASILKAFN NPPTKTADDETRKKVKTYGKEGVKMN IDRIFIGELTSTMCEECANISTVKDPFIDI SLPIIEERVSKP
7357	15408	A	8013	18	280	KCRSRN*TA*FHRLNAKALSLLTLLNVY QKKHLVEILSYHNCDSQTRNAPELDCILIR LQAQNIQQRHIVFLTGKESTPKLSTMNIG M
7358	15409	A	8014	3	271	FFLRQSHSVTRLECTGAI*AHCNLCPLPGS SDSPASAS*VAGITGMCHHARLIFVFLVE TGFHHVGQAVLELL/NLMICPPQPPKVLG LQA
7359	15410	A	8015	609	921	FYLSEEAFFFFFETES/HLLSPRLECSG MMSAHCNLRPLGSSDSPASAS*VAGITG GHHPAQLIFVAF/MYQPGFCHVGQAGQQ LLA*VICLPQPPKVLGITGA
7360	15411	A	8016	140	346	FPPICYLLEIGSHSVVQAGVQWHRHSAQ YP*IEHKQSSCVSLMSS*HYSHVPPSPG NILL*RRGSCV
7361	15412	A	8017	2	348	AGVPPGNPPLWGEGGGSPRGGLKPG FPQRGNPFFFKKSQTPPGGGPPLIPPPW GGGAGGSPLPQGQRFQ*TKIGPFPSPRGK KKKPPFPKKKKKKKKRKEKSEMPGFMV LNA
7362	15413	C	8018	282	497	
7363	15414	C	8019	267	473	
7364	15415	A	802	160	434	LISVIPALWEAKAEDHMRSGVQDQPGQR GKTPSLRKIHRLARHGGMHL*SQLLGRL KHKNRLNPGGKSCSEPRSHHCSSAWAT DQDSVSKK
7365	15416	C	8020	435	821	MKSRVIGWASGLKNEIFFFFWRDR YRAMLPRLVLNLLFLIEPPVSILVKHWD YRHEPPPPRXRLPFCMMRLEGPHCFRDF ATTYKKQSVRTVAGLFSLIKFSAHTNLD QRIWDLNPISGYFPN*

7366	15417	A	8021	121	818	HSKGSQVQSPGPEPSSAGPKPGAQPOPT WGLAAPEEGREGGKCGRHCRNSKPLSQ PCAGVWSGRGAEEGGAGPDHPARPTGP PSSPSCSAGLPDL**GLKPPLEASSMDPGF VLEGGPRVREGVCQDGI*A*ELEEVPSPG GSATSGAATLSDRRGNGASQARLP*PS HWLPRAK*APQG*ASPGSPTACPAHPHS WKGSAGPGMGRGRVVGDRGGAWGT GSHCNPTPSS
7367	15418	A	8022	11	368	SFTCCFQMHTKLLCLNTLCNTFLSTGAFF LIVLTWLSPIAVRLSLNVISERPFLFILSVV DPCAHILYLSLLFVS*VLPQYVIALFVPH KRM*ETMYACLPVCP*LLTACLEHNCSE I
7368	15419	A	8023	3247	5031	EGLRGTAALLTGGRGP*GQPOQ/PGGP ASSPSAPAGPAAAEPACSTALWPTVSL RAPSPCPPQAGQGYGSWG/GEFG/NSM ASGGDG/EPLSQGLAPAGTPGLARLQGP GHWAVSLWPSLRGFGPGPQTGQSPLSQ HSALTGRGRSPGALGPPPPQRPHPAP DPARPQR*TLTAGATTRPOHLPQGNCR CSLLLLLFLLLFFLLFLFLFFLLFFL LIFLLLLLFLLPISLRNLRSQWDLGGGEQ HVREAHPPDPVEQPRPFSVIGEVSEVLV GQTORHSSWEAHLKWGRHGEHLGLEVI GPLPNPRKAWMPHLLQLGPRDAEHRGH ESVVASSEGRVAPVGRPHRAALSRAAAL NEGTGGARGAAAAGVRVMLRLQRGGG EHGGRQSSQGAVPREGVRESVLLQLSL WACGVRLSPSRAGSRVQG
7369	15420	A	8024	87	567	KQPPPHGESAAWAATSRPGWLLCRPA EGRTPGWTAFDVHPTLMQKLPEHSGNFS GQSPPCQLEALPRPSTCPLGSSRGSGREG PLPPT*ELFPNGQSVRCQVGGPGYDSWC PGPGPAPCPPTP*M*GPQALTSAPGPNK HPGLELGRRGPERAPGPF
7370	15421	A	8025	2	347	KALACPPTCCVLGVHHA VSAGGFPGHR PLVRRHIAPAGHQVTL SFLHPTLCCHPKS NCTPCGSRRVPTPTPLPAPGPQAFCPVP GSHWLAWSPRGRSPPTSVAPTQPY*QPP SC
7371	15422	A	8026	3	359	HEGTVQQPQARGLYEDLLMSEGEDED DAGSDDNGDNIFSAIHLSESRDSDA*FG GIRPKQSRMLKENTRMVMDNEERLLFY EGDCGEASHGLEDSCLSYGSYEDDPDK WNTQNTSFC
7372	15423	A	8027	2	424	
7373	15424	A	8028	3	456	PQTQREPTMVLSPADKTNVKA AWGKVG AHAGEYGAEALERMFLSFPTTKNYFPHF DLSHGSAQVKGHGKKVADALTNVAH VDDMPNALSALSDLHAHKL RVD\PNFK LLSHCLLVTLAAHLPAEFTPAVHA\SLDK ILASVSTVLTSKYR
7374	15425	A	8029	3	198	RQGSCSVTQPGVQWNNLGLL*P*PPGLK QSSYLSSPSSWDYRCVPTRLANSYFKFI* YVFFCLF
7375	15426	A	803	1223	1338	RWPLWSFIIETKRRTL*SQLLRRLRQENL LNLGGGGCS
7376	15427	A	8030	1	346	LFAQPNPVTFKIRIYCMSKDIDKVRARP PEWEKICANH VYNKGLGSRIYKVLLE* KNIVRLNQKANAQFYAGYKLCYRKFS NKSIVNE*KVLLFMR*EYIPVSTHFICCVI L
7377	15428	A	8031	60	523	

7378	15429	B	8032	68	679	MGKEKXHINIVVIGHVDSGKSTTTGHLIY KCGGIDKRTIEKFEKEAAEMGKGSFKYA WVLDKLAERERGITIDISLWKFETSKY YVTIIDAPGHRDFIKNMITGTSQADCAVL IVAAGVGEFEAGISKNGQTREHALLAYT LGVKQLIVGVNKMDSTGIAILTGD FPSLE PRHVSTWLQHVVTIPTRNWHKCYCVGV VANFLN*
7379	15430	A	8033	53	1497	KLPLKAKMGKEKTYINLAVIGHVDSGK STTTGHLIYKCGGIDKRTIEKFEKEAAEM GKGSFKYAWVLDKLAERERGITIDISL WKFETSKY YVTIIGAPGHRDFIKNMITG TSQADWCCPELLLLGVGEFEAGISKNGQ TREHALLAYTLGVKQLIAGANKMDSTE PPYSQKRYEEIVKEVSTYIKKIGYNPAT VAFVPISGWNWDNMLEPSANMPWFKG WKVSRKDWQCQLGTTLEALDCILPPT RPTDKLLRLAFQDA*QNGGIGTVPIVGR VETGVLKPGVMGVTFAPVNVYNGK*KS VEMHHEAFECKLFPGDCKGAFNVKINV SVKDVRRGNVAGDSKNPPMEAAGFT AQVIILNHSGQISAGYAPVLDCHTAHIAC KFAELKEKIDRRSGKKLEDGPKFLKSGD AAIVDMVPGKPMCVESFSDYPLGCFAY RDMRQTVAVGVKAVDKKAAGAGKVT KSAQKAQKAK
7380	15431	A	8034	3	309	RFTGHYRMLSGEKP YEWIEWGKRLSSN TALTQHQRHTGENPFECKECGKAFNQK ITLIQHQRVHTGEKPYEC*ACGKTFRWG GRFILHQNLPQTQKTPVQA
7381	15432	A	8035	3	366	RDSVVEILFEQDNKEQSVATLILDSLIQCP IDTRKQLAENLEMMFDVGKTQPPLKRA FSTEK*KFD*/TINLAS YQIFNQL*ANCTK YVGCFVIEDYSGSESILCLLFALIYNSFDF VSLV
7382	15433	C	8036	310	546	MGIMSVPPHPQNV DYP LDGEKILHILGF NPEIQLWEILFEQDNGRAISWPLLILGFPL YSVPIGHQGRQLGRRNLGRS*
7383	15434	A	8037	97	333	HRIRPICSPQYMEKVYVTKNNNYRILEID MNFFFPETEGVGGQVLEVMPHEELKPS IFFFF*DRVSLCHPGWSAVVQS
7384	15435	A	8038	250	378	TESLYLNTIKATYEFKTANITLNNEMLKA FSLRLDTR*EHSLS
7385	15436	A	8039	280	759	GYINNGGRKRRTTELKPTPRSCRAEGGG VEGGPPACPPPTNCLQRLQPHLGSCTEIS GQERE*GYINNGGRKRRTTELKPTPRSC RAEGGGVEGGPPACPPPTNCLQRLQPHL GSCTEISGQERESGGEGNSGSPNNRVH GFSKAGHGLGVGEEEEERQLWL*TGRK QRPNIPIRRLPQASLHLPASPCQPAVPG ALSSPRRWQPPASHSCSPPRHTKS
7386	15437	A	804	1057	1354	SQHFGRLWQVNHLRSGAPAQPGQQGKT PYLLKIQKLAGRDGARL*SQLLRRLRQE NRLNLGGGCSEPRSCHCTPAWVTKRD SFSKTNKQTENNKKRIL
7387	15438	A	8040	1	401	ILVLDPPPQPKLLSVKGNPEDFIFRQFFF SPYPLFPFPFSYAKPPVSNETPFPHPHPRF SKLLSQPADMPPLPGSLP*LLHYSACM LHHLFCSLAHCAFRLLSCQGCQYLHGL MHMFRSGHMHYAAGR V
7388	15439	A	8041	32	378	CVYTFIC*EISGLFPVWG*YRK*GSSSSSS SSSSSSSSSHFNKYSSCMFNFF*NC*TVL QSGCTILLHHWCMRVLSP* CQQHLAV FFSHAILLSV*LHLT VIFICIPQITS
7389	15440	A	8042	30	434	DGSSLCRPGWSAEQDCVSSGGEKKKKKG RDNIEDEACSSRPSR*LFENIHLVHALIE EDQLANIIDISAGSAYTILDEKLTLSKRFT RWVPKPLPSDQLQTRAEFLMEILNGWD

						QDPEAFLQRIVTGDDET*FYQR
7390	15441	A	8043	3	340	IPKPMAKLPFMKYRDLHTNLLYSRMETG PKHIPMKTLLKIMEDIALGMDNLSLMNY LYLELTARNCMERDDMTDCEADFGLSR KRYSGENYLHCRIANRPV*GSAIESLAHR
7391	15442	A	8044	3	378	LIKKHVDFDLATNVQEEKIAALEDFAHQ LITAGHYAKGDIFSRRNEVLDWRWRVKT QMIEKRA*V*KSQTLQQFNRDVDENEA WISEKLHTASDDSYKDPTNIQLCKLLSK HQBHQAF*TELPAT
7392	15443	A	8045	169	375	SSSSLPLHITNNPLHQQLPPQLPAYTGA EGDPCALLS*YCLIHLLNTEAVNNITFLG KQPCCKRYDKV
7393	15444	A	8046	27	289	RSPKTHGGGRRWGMVRPGTAPT/PCCPH RPQLP/CQPLLGPE*SLLEGRSSSLDSGM EESQTHAAPACRTWCSDGPR*PWMGPA ARCSG
7394	15445	A	8047	3	284	LFLWRRQLTLTENPRWWPTLGDGQARD CSDACCPHRPQLPSSHCSQTKSSPIEVPR PPKHR*GGVCAGPSHLPGGPGSSPSPCP WPGSGLF
7395	15446	A	8048	459	1020	EPGRGAEQGGVPGGKGPETSAAPAPTPA REPERVPGGA/PPAPECACAEVAAPAPA GGSL/PAGPRPWERPRWAAGAP/QGDKG PGEAATSPA/RGDSGVEPRGGGVPLPRH AGPQARRCEPTLPHDLYSGQVQPEHRAA G/LHPRSSGTI*APCTTCRAA*V*DSSIPE SREELRPSKKRSFRSEKEK
7396	15447	A	8049	3	417	VTGKAFAQKAQLIVHQIHTGKKPYDC GACGKDFREKVHLVRHQRTHTGEKPYD RSEKGAFAFHKSDLIHHRVHTGEKPYEC CECGIAFSQKSPLIHCRIHTGERPYECIK CGKAFYHK*QLSIAHRAHTGDIAG
7397	15448	A	805	831	1082	SQHFRPRRADHLRSGDRDHPAQHGETP SLLKRQKLASHGGRHL*S*LLWRLRQEN HLNPGWGGCSELRWRHCTPAWATSKNS F
7398	15449	A	8050	29	223	LIKKLASCGGEHLYS*LLKRLRWEN*SSL GV*GCGEL*SQHCTPTWVME*GPAQKH KNKTKKLL
7399	15450	A	8051	194	372	ICQPLSLSTANHPVLCLCFTHKNLHIFIA ALFILAKSWKQP*CTSVDEWIWGLAPLY
7400	15451	A	8052	1	325	FFFFF*DRVSLLLPKLECNGTISAHCNRL PGSSDSPASASSSFFTHVAPLPQLRHY*I FYDGTSLYAG*YSQNLLIYSAPRQPQY HFKDMNKILDSIQRSYTKI
7401	15452	A	8053	228	481	QFFRNTIFF*DRVSLLLPKLECNASIAHH NLCLPGSSDSPASASRVAGITGTCHHTRL LAFVFLVETGFYHVSQSGLELLTSGD
7402	15453	A	8054	175	431	LIVKMPFLK*SWKIF*MSK*VMLIH*GF VFLFVCAFF*DRVSLLLPRECNBPISAHR NLHLPDSSDSPASAYIKGFVRQLSHEE
7403	15454	A	8055	257	453	TKGGGYTQRTAIQFIYFIY*DGVSLL LPRLE*NGAISAHCNLHLPGSSDSQKKT KNFCTQ

7404	15455	A	8056	277	1230	ISFHLSTFGAPSF FFF FEMES LLL PRLEC NGAISAHRNLR L PGSSDSPASASPVGWD YRHVHPRSANFV FFF SRDGVSPCWGLV SNSRPQMIPPSRPPKVLD TGLATMPGLCL ANFCGRNRVSLMCPSWSPELKQSTCLSL PKCWDYRRAAVPGLFILF L RHRCPTLT QDEVQWCDHSSLQ PSTPEIKHPASASQS SWDQRHAPLHLANFYFYF*FFETESHVS TRLECSGAILAHCNLC L PGSSSYSPAS* VAGTTGAH/RRLANFFVFLVEMGFHHVR QVDARSLDLVICLPRPPKV L GLQDVSHH RPAYF
7405	15456	A	8057	1	467	FFFLF*EGV S L L L PRLECSGAISA/HCNLH LPGSSDSPASASQEDGITGVRYHAWLIL/ VFLVEIGFHHVGQADLKP*PQVIHPLFF FFLRQSFALVAQAGVQWCDLSSLQTPPP RVQGILLAQPPEYL VAGFTGMRHHTRLF FFAFLVETGFHPC
7406	15457	A	8058	274	321	
7407	15458	C	8059	69	254	MDHLYNXXXXXXXXXXXXXXXXXXXXX XXXXXXEIQFXXXXERERNKNPFPAGD DIISRGVQG*
7408	15459	A	806	144	441	GYQLPLQDELVLGQFLFQVSKIRFFSARK ITCNSHFLLLKFF*FPHIICK*VSFSERAA AADRAGASHPRIHNLQRLQENSIRGPK YSSHTVSADAW
7409	15460	A	8060	32	169	NPVPPYPLCPALVFFLLLIYLLIY*PSPLL MSAPAGKGFLFLSL
7410	15461	A	8061	417	490	
7411	15462	A	8062	424	579	
7412	15463	A	8063	1	2157	GFQKRCRHRIAQLFAVGALVCCLVLLHL SAMISASRAAAARLVGAAASRGPTAAR HQDSWNGLSHEAFRLVSRDYASEAIKG AVVGIDLGT TNSCVAVMEGKQAKVLEN AEGARTTPSVVAF TADGERLVGMPAKR QAVTNPNTFYATKRLIGRRYDDPEVQK DIKNVPFKIVRASNGDAWVEAHGKLYSP SQIGAFVLMKMKETAENYLGHTAKNAV ITVPAYFNDSQRQATKDAGQISGLNVL VINEPTAAALAYGLDKSEDKVIAVYDLG GGTFDISILEIQKGVFEVKSTNGDTFLGG EDFDQALLRHIVKEFKRETGVDLTKDNM ALQRVREAAEKAKCELS SSVQTDINLPY LTMDSSGPKHLNMKLTRAQFEGIVTDLI RRTIAPCQKAMQDAEVSKSDIGEVILVG GMTRMPKVQQTVDLFGRA PSKAVNPD EAVAIGAAIQGGVLAGDVTDVLLLDVTP LSLGIETLGGVFTKLINRNTTIPTKKSQVF STAADGQTQVEIKVCQGEREMAGDNKL LGQFTLIGIPPAPRGVPQIEVTFDIDANGI VHVSADKGTGREQQIVVQSSGGLSKD DIENMVKNAEKYAEEDRRKKERVEAVN MAEGIIHD TETKMEEFKDQLPC/ADECN KLKEEISKMRELLARKDSETGENIR/QAA SSLQQASLKLFRNGLTKMGS*AEEGS GSSGHWGNKREDSKGREKPVN
7413	15464	A	8064	500	752	

7414	15465	B	8065	1	1713	MALWRGSAYAGFLALALTWRDRKKKF PGDDEAPGVKRTWAAGAGMRGRQWLR KRVEVVCTGRSANTVCAGVRAAGLVEK SPPPSLSRVGRRFRFCGDLDCPDRVLAEI STLAKMVECTGSTLGGGGYKKILKLTAD AKFVEEHEGKKDIDSPTFLSSASSWSSS SAYGSRRPGGFELKLIGQQGESGDVKAT VAVLSFILSGAAKHSVDGKSLASELQQL GLPKEHAASPCCCYEKQSPLOKHLRVC SLRTWSLAARVAEGTAETVDPAAAPKTS VWSSRVCWGRLLATISPSVNETDTCGME DRRLVVCWPWRAQCHMKAWGWRHPEE GGTHSGAPSAVLQALAVAIQLGGHLADP LLQVDPLSSCGAVSLDILIYLVFYRTAS VPETYIVKTLFKKLESQSLIQSNVLRN SMKAERGEEAAKEKSEASRGWFMRFKE RSCLHNIKMQGEAASADVEAAASYPKD LAKITDEHGYTKQVRCIQNSLLLEGNA EEVRKIIVCSMSPPLKPGGPVTLVEEFLC ASKASVSAVSGWISKWRNWQEIRRQEE REDRASLPDLQASES*
7415	15466	A	8066	1	3053	MRPGFVSVGMVEGVPGEPPYPVLCY TPWPGHDLPASRAALAQGRSWSLHRMI GQDSGRRRSRRQHFAPTSSGLRSAPGL TRAGPAPPEAVSPSHVIVDSADLAGPEKE IPGPWLPRAMYEAAGVKRAWAAGAGM RGRQWLKRVEVVCTGRSANTVCAGV RAAGLVEKSPPPSLSRMGRFRFCGDL CPDRVLAEISTLAKMVECTGSTLGGGGY KKILKLTADAKFVEEHEGKKDIDSPTFLS SASSWWS
7416	15467	A	8067	330	452	
7417	15468	A	8068	3	347	
7418	15469	A	8069	3	1279	
7419	15470	A	807	165	1222	QSKRLNAKRYLLTDNVVKLKEFQQKKV AVACNLSGTKETYFRNLKKLTQNKLL KGELITLLHLCESRDHVELAKNVIYRYH AENKNFTLGEY*FGPLFVRLCYQLDLEE SAGELMKDQHLRGFFSDSTLFNLMMDL FIKGKYKSALQVLIEMKNQDVKFTKDTY VLAFAICYKLNSPESFKICTTLREEALLK GEILSRRASCFVALALNQNEMAKAVSI FSQIMNPESACINLNIIHIQSNMLENLK TLKNAEAGNLSKFVKRHFVSEEV LAKV REKVKDVPALVAKFDEIYGLHITGQVT TDSLDAVLCHTPRDRKSHLTLNKR MVS RRTFQPLSQSLLAE
7420	15471	A	8070	1	496	LLGVAPSRAFQEEILR/DRASFHE/RPNLF ALKHPTSKAECTAEKCYRVTKGRGIFPS GSPFKSVTLEDGKTFIPGQGNNAYVFP VALGVIAGGIRHIPDEIFLLTAEQIAQEVF EQHLSQGRLYPPLSTIRDVSLRIAIVLD YAYKHNLDSYTPWPEAMNVQTV
7421	15472	A	8071	228	448	

7422	15473	A	8072	3	1877	EGEDRGLPRTMGAALGTGTRLAPWPGR ACGALPRWPTAPAQGCHSKPGPARPVP LKKRGYDVTRNPHLNKGMAFTLEERLQ LGIHGLIPPCFLSQDVQLLRIMRYERQQ SDLDKYIILMTLQDRNEKLFYRVLTSDV EKFMPIVYTPTVGLACQHYGLTFRPRG LFTIHDKGHLATMLNSWPEDNIKAVVV TDGERILGLDGLGCYGMGIPVGKLALYT ACGGVNPQQCLPVLLDVGTTNEELLRDP LYIGLKHQRVHGKAYDDLDEFMQAVT DKFGINCLIQFEDFANANAFRLLNKYRN KYCMFNDDIQGTASVAVAGILAAALRITN NKLSNHVVFVQGAGEAAMGIAHLLVMA LEKEGVPKAEATRKIWMVDSKGLIVKG RSHLNHEKEMFAQDVHPESNSLDEVVRL VKPTAIGVAAIAEA\FTEQILRNMAFR RAPIIFALSNPPRKAECTAEKCYRVTEGP RGFFASGSPF*GVLIWEMGKTFIPGGRG NNA\YVFPGVATG\VIA\GGIRHIP\DEIFL LDSRAKLQEVSEQHLSQGRLYPPLSTIR DVSLRIAIVLDYAYKHNLVSYYPEPKD KEAFCKIPGSYTPDYDSFYT\VDSYIWAQ GKAMNVQTV
7423	15474	A	8073	325	587	
7424	15475	A	8074	124	343	
7425	15476	A	8075	32	487	SRRHGSSLWGKVNVEDAGGETLGRLLV VYPWTQRFFDSFGNLSSASAIMGNPKVK AHGKKVLTSLGDAIKHLLDLKGTFAQLS ELHCDKLHVDPENFKLLGNVLVTVLAIH FGKEFTPEVQASW/QEDGDWSGQCPVLQ IPLSSLPMMQSFQG
7426	15477	A	8076	3	573	FCPRGQEFGEKNKLLVPDAHGVISQRT KATITSLWGK\VNVEDAGGETLGRLLV VVYPWTQRFFD\SFGNLSSASAIMGNP\A KVKAHGGKVLTLGRCQQSTLDDLKGT FAQLSELHCDK\HVDPENFKLLGNVL VTVLAIHFGKDFTEGCRASWQKMGD VSGQCPVLQIPLKPLGP*IQ\SFQG
7427	15478	A	8077	2	347	
7428	15479	C	8078	213	263	MGFHHVSQDCLDLLTS*
7429	15480	C	8079	637	1452	MGIAAASVLGDLAVVFGMHVPAQADG QDHPQELDHGHTHAHAEDDAQVLLQPR LHLLHAALLVHRPVLRVVATLGPVAGG LAEALPHRKAVVLFPLDFAGTGVGDLR AIHEL SVVCPVVEADPAAALHLSLHVVP GILQAVLATAVVVSNELSHDATHLLLQL AHVEVEEGPGRHLGNEDQEQESKVQPQ QAADLVDGADAAQEAHEHSDCPHADED IGPHPKRAGGGLQDRDETALVGQDPHPE AQDHCAQDKEDQVEEEKVFGDFDTG*
7430	15481	C	808	324	500	MGNWGRSSFLKLQNLVFLKMRSDQA QWLTPKIPALWEAEAGGSSEVRSLSAW STW*
7431	15482	A	8080	226	314	
7432	15483	A	8081	2	350	KTLLFFFFRFEPHNLLTSMICGLVYNQP PPQHLVHILLKRRIWPQGNILGINKKRP TVAHTCNPSTLGGRRGRITRSGVRD*PG QHSESPSLPTIQKNYPGVMAGACNPSYS GG
7433	15484	A	8082	172	287	IVYASEEKI*TFQEQGWPGAVAHTCNPST LGGRGGRITRSGDRDHPG*HRPP
7434	15485	A	8083	14731	15030	IAGCRPGAVAHSCNPSTLGGRRGGQ/TLR SGV*DQPGQYGETPSLLKIQLGRRGGR RLKSQLLREAEAGESLEPGRQFAVSRHR ATALQPGNRARLHLKK
7435	15486	A	8084	1	193	
7436	15487	A	8085	1	346	
7437	15488	A	8086	3	522	

7438	15489	A	8087	1	840	HMELPYGTLTDDMRRNLNIPVLQDDGFL FLWVTGRAMELGRECLNLWGYERVDEII WVKTNQLQRIIRTGRTGHWLNHGKEHC LVSSSGAQFNWRSTKKNHLISY*EKVQR CGFIR*SVILW*AGGVKENPQGFNQGLD L*CDRS*GMCFSGLQSFHIFVGYQLFMV GCILIPRFFLI*IINIIGKGLGAILCNLKKQ LVFIS*VRSTSHKPDEIYGMIERLSPGTR KIELFGRPHNVQPNWITLGNQLDGIHLLD PDVVARFKQRYPDGHIISKPKNL
7439	15490	A	8088	13	323	
7440	15491	A	8089	3	218	
7441	15492	A	809	1734	1910	NWVGGQQEGREFFQV*WATDLKSA*GE EIEPDIPKLKPGGQKWETGLRFLHFDK WFF
7442	15493	A	8091	3	332	
7443	15494	A	8092	1	1431	MHKAGLLGLCARAWNSVRMASSGMTR RDPLANKVALVTASTDGIGFAIARRLAQ DGAHVVSRRKQQNVDQAVATLQGEGL SVTGTVCHVGKAEDRERLVATAVKLHG GIDILVSNAAVNPFFGSIMDVTEEVWDK TLDINVKAPALMTKAVVPEMEKRGGGS VVIVSSIAAFSPSPGFSPYNVSKTALLGLN NTLAIELAPRNIRVNC/LAPGLIKTSFSRM VLGEPEDCAGIVSFLCEDASYITGETVNV LSVMFTGGGVCRAASWKEGGTGTPRTP RESPRQREPGETSSTDQENKVNGLPA NPQRPAAGPVRRTKNKQKGIASAKD SINIRTGKDIHTKTPSIGHQHQRPKVDKT TKMERNQSKKAETSRNQNVSSLPKEYKS SPAREQNWENKFDDLTDVSFRRSVITN YTQLKEHVLTHCKEAKNLDKMLNEWLT RMKNLEKSLNDLMELITTVQELHEGYTS FNS
7444	15495	A	8093	195	434	
7445	15496	A	8094	43	1601	SMHKAGLLGLCARAWNSVRMASSGMT RRDPLANKVALVTASTDGIGFAIARRLA QDGAHVVSRRKQQNVDQAVATLQGE GLSVTGTVCHVGKAEDRERLVATAVKL HGGIDILVSNAAVNPFFGSIMDVTEEVW DKTLDINVKAPALMTKAVVPEMEKRGG GSVVIVSSIAAFSPSPGFSPYNVSKTVLLG LTKTLAIELAPRNIRVNCLAPGLIKTSFS RMLWMDKEEESMKETLRIRRLGEPE DCAGIVSFLCEDASYITGETVNVLSVMF TGGGVCRAASWKEGGTGTPRTPRESPR QREGENQARSSPRMALRPEFPESASTS WMGPEPVGNRERPCPKARKVGASPRAL RRLGSATRMLSRAALRAGVGARAPRG GGRGAHATATVWSGLASAAALTARALL KRSLACAAAPQRCGWRRLCSSLGSRG QGGQAHRGAHLRVRYGTASVFGTPRL VASQIQHVPSGPAPRPGASHPATPSIQL RQPLHLSPDIAVPGASSAGAGA
7446	15497	A	8095	2	172	
7447	15498	A	8096	3	823	
7448	15499	A	8099	346	461	
7449	15500	A	81	457	489	PP*ITLG*KTCSQARWLMPVIPTLWKA EVRGSRLELRLRPAWATRRNPSTKN/LKIS WGRQGSSELRSRHCTPAWQHSETPI
7450	15501	C	810	226	306	MTTSPPPSALQKKEMEILPVILRVPS*

7451	15502	A	8100	3	1560	SSLWRRQPELKAYRTMEYMAESTDRSP GHILCCECGVPISPNPANICVACLRSKVDI SQGIPKQVSISFCKQCQRYFQPPGTWQC ALESRELLALCLKKIKAPLSKVRVLDAG FVWTEPHSKRLKVKLTIQKEVMNGAILQ QVFVVDYVVQSQMCGDGHESEKLKDF WK\AVIQVRQKTLHKKTFFYYLEQLILKY GMHQNTLRIKEIHDGLDFYYSSKQHAQK MVEFLQCTVPCRYKASQRLISQDIHSNT YNYKSTFSVEIVPICKDNVCLSPKLAQS LGNMNQICVCIRVTSAILHIDPNTLQVAD IDGSTFWSHPFNSLCHPKQLEEFVIECSI VQDIKRAAGAGMISKKHTLGEVWVQKT SEMNTDKQYFCRTHLGHLNPGDLVLG FDLANCNLNDHEVNMNSDRVPDVVLI KKSYPDRTKRQRRRNWKLKELAREREN MDTDDERQYQDFLEDLEDEAIRKNVNI YRDSAIPVESDITDDEGAPRISLAEMLEDL HISQDATGEEGASMLT
7452	15503	A	8101	1	171	
7453	15504	A	8102	3	231	RRQAQIAAGRVLVVALFGGCGGLHSRL DGAAI/CLPGHCHGSRVEVTYETHQCGL VGLKLLRGGREQSDRGGSLGLT
7454	15505	A	8103	48	532	NLMNICRGPCLLPGAPFMRDLAAVA/SV GLP/LVRRQAQVAAGRVLVVALFEGCG GLHSRLDGAAILCPGHCHGSRVEVTYE APQCGLVGLKLLRGGREQSDEGGSGLT *DAQLGPAGAEHPEIRAAWE*TAVIISLVL SLEPRDGQGGRVARLGAREIGNP
7455	15506	A	8104	3	421	AAEASVGL/PLLRQAQIAAGRVLVVAL FGGCGGLHSRLDGAAILCPGHCHGSRVE VTYETHQCGLVGLKLLRGGREQSDRGG SLGLT*DGQLGPSAEDYTISSCPHLTGIV GLIPGLDSADGQGGRVPRLGARESVRDT
7456	15507	A	8105	94	582	LSHPLPLALGRQAQIAAGRVLVVALGG CGGLHSRLDGAAILCPGHCHGSRVEVTY ETHQCGLVGLKLLRGGREQSDRGGSLGL T*DGQLGPSAEHQSVSVPSLTVIISLILRL EVGDGEVAVSPRAGAREAIRNSAPLVVA STTFKPHQVPRGLSCLLLMPRDVVPTVS TAQSAGEPDRGSQGSRRGR
7457	15508	A	8106	2	332	GSLQGLPGQSFSFGGLPLLGRQVRVAAG RVLVVALFGGFGGLHSRLDGAAILCPG HCHSSRVEVTDQTH*CGLVGLELLRGG EQSDSGVGLGLTQDGLRSTSEDKVC
7458	15509	C	8107	30	653	MTCSPLLLTLIHCTGSWAHSVLTQPPSV SAAPGQQITISCSGSRLNVGNVFSWYQ QLPGTAPKILIYDNDKRPSGVPARFSGSK SGTSATLAITGLQTGDEANYCYCAWDTS LDNWVFGGGTEVTVLGQPKAAPSVTLF PPSSEELQANKATLVCLISDFYPGAVTVA WKADSSPVKAGVETTTPSKQSNKYAA SSYLSLTPEQ*
7459	15510	A	8108	484	632	PWSHFRF*LTMRIFIEGLLSAGRRA/WM PWGGRDPSPGILQL*SPVGGVRDENL* TFCRGHCLLHGAPFMRDLAAVAFVGLP LLRRQAQVAAGRVLVVALFGGFGGLHS RLDGAAILCPGHCHSSRVEVTDQTH*CG LVGLELLRGGREQSDSGVGLGLT*DGDL GPTSEDSKGATTSKRAAVIISLVVLEPR DCQGGRVGRHGAREAINP

7460	15511	B	8109	27	1337	MAWTPLLLLFPLLLHCTGSLSQPVLTOSS SASASLGSSVTLTCTLSSGHSYIIAWHQ QLPGKAPRSLMKVEGDGSYKTGRGVDP RFSGSSSGANRYLSISNFQSEADYYCQ AWDSSTAHS DTGRGIVGRPPVRQCWP LLLLGLAMVAHGLLRPMVAPQSGDPDP GASVGSSRSLSLWGRLLQPSQPRAD PRCWPRGFWSEPSLCYVFGTGKVTVL GQPKANPTVTLFPPSSEELQANKATLVC LISDFYPGAVTVAWKADGSPVKAGVETT KPSKQSNKYAASSYLSLTPEQWKS HRS YSCQLQWGLGLGASQGGFLYEPVSQCV VFGGGTKLTVLGQPKAAPSVTLFPPSSEE LQANKATLVCLISDFYPGAVTVAWKAD SSPVKAGVETTPSKQSNKYAASSYLS LTPEQWKQAQKLQLPET*
7461	15512	A	811	168	258	GHLGPRQKQARGL*GHRVQVLHNYVI PM
7462	15513	C	8110	54	410	
7463	15514	A	8111	1	175	
7464	15515	A	8112	1815	2017	GQGA VAHTCNPSTLGGQGGRITLRSGV QNQPDQHGETLSLLNISGVWWRAPVIAA FQEAETGESLEP
7465	15516	A	8113	1109	1482	
7466	15517	A	8114	266	399	
7467	15518	A	8115	6	361	
7468	15519	A	8116	688	1127	
7469	15520	A	8117	2	311	
7470	15521	A	8118	2	51	
7471	15522	A	8119	203	365	
7472	15523	A	812	229	434	TEELKRCRQTLPSGCGVLPWRARLAVG VS/GRRGRSSSPMLTPSAAPCGNPGSLTS NLPAAGCKPSCQAW
7473	15524	A	8120	152	314	
7474	15525	A	8121	11	380	RLHRFFLGESEQSPASSSSSSSSSLTPSQ TRQHGPLRSIMKDLHSDDYEESEYEVDD NDNDSKMERPANR*RTRSRTVSLSDGSD SESRTSS*PLHYEPPLLYTNNNQILEVE SPITHSL
7475	15526	A	8122	124	1924	ITAEGRRRRGGYHTTPQQTSGPPGMAS CSVQVKLELGHRAQVRKKPTVEGFTHD WMVFVRGPEHSNIQHFEKVVFHLHESF PRPKRVCKDPPYKVEESGYAGFILPIEVY FKNKEEPRKVRFDYDLFLHLEGHPPVNH LRCEKLTNNPTEDFRKLLKAGGDPNR SIHTSSSSSSSSSSSSSSSSSSSSSSSSSS SSSSSSSSSSSSSTSFSPKPHKLMKEHKEKP SKDSREHKSAFKEPSRDHNKSSKESSKK PKENKPLKEEKIVPKMAFKEPKPMSKEP KPDNLLTITSGQDKKAPSKRPPISDSEEL SAKKRKSSSEALFKSFSSAPPLILTCSAD KKQIKDKSHVKMGVKIESETSEKKKST LPPFDDIVDPNDSDVEENISSKSDSEQSP AS'SSSSSSSSFHTIPGPGQGGPLARSIMKD LHSDD'NEEEADEAEDSDNDSEMERPVN RGGSRSRVSLSDGSDSESSSASSPLHHE PPPLLTNNNQDSWKWKSPIKQSKSD* GKLKNGEC*QGLT*MELVGAFTGRFIDF EEERHILQQIVNLIETGHFHTNTTFDFD LCSLDKTTVRKLQSYLETSGTS
7476	15527	A	8123	2	319	
7477	15528	A	8124	1	323	
7478	15529	A	8125	31	118	
7479	15530	A	8126	1	4938	
7480	15531	A	8127	472	4356	
7481	15532	A	8128	2	236	
7482	15533	A	8129	503	638	

7483	15534	A	813	1060	1542	GRDMVAPDASWKEASGCNAPARICPGQ AFRANGCSDPTLGIQHQRFLRSRLSPKVL GPVGQPWELGGE*DEAPSASFFSHWEVL GRLLVGASGSPSVKQEPAAALERARVPGD AARRQPRDRKGPPGPPCCSEHPAPVRAP LVAGLG DAGSGAPRAKLGVM
7484	15535	A	8130	464	2848	GETGMSTALHTTVAMRCPMLGGGGGP TYGPPQPWGHDPDVHIMQHHLPIQARLG SIAEIDLGVPPVPMKTFKEFLSLDDSDV ETEAVKRYNDYKLDFFRQQMQDFFLAH KDEEWFRSKYHPDEVGKRRQEARGALQ NRLRVFLSLMETGWFDNLLDIDKADAI VKMLDAAVIKMEGGTENDLRILEQEEEE EQAGKPGEPSKKEEGRAGAGLGDGERK TNDKDEKKEDGKQAENDSSNDDKTKKS EGDGDKEKKEDSEKEAKKSSKKRNRK HSGDDSFDEGSVSESESESGQAEKEE EAEALKEKEKPKEEWEKPKDAAGLEC KPRPLHKTCSLFMRNIAPNISRAEISLCK RYPGFMRVALSEPQERRFFRRGWVTFD RSVNIKEICWNLQNIRL/RECELSPGVNW DLTRVRNNGITQHKQIVRNDIKLAAKL IHTLDDRTQLWASEPGTPPLTSLPSQNPI LKNITDYLIEEVSAEEEELLGSSGGAPPEE PPKEGNPAEINVERDEKLIKVLDKLLLYL RIVHSLDYNTCEYPNEDEMPNRCGIIH VRGPMPPNRISHGEVLEWQKTFEKLT LLSVRESLSEEEAQKMGRKDPEQEVEKF VTSNTQELGKDKWLCPLSGKKFKGPEFA RKHIFNKHAEKIEEVRKEVAFFNNFLTD AKRPALPEIKPAQPPGPAQILPPGLTPGLP YPHQTPQGLMPYGGQPRPILGYGAGAVR PAVPTGGPPYPHAPYGAGRGNYDAFRG QGGYPGKPRNRMVRGDPRAIVEYRDL APDDVDFF
7485	15536	A	8131	2	433	
7486	15537	A	8132	1073	3545	GETGMSTALHTTVAMRCPMLGGGGGP TYGPPQPWGHDPDVHIMQHHLPIQARLG SIAEIDLGVPPVPMKTFKEFLSLDDSDV ETEAVKRYNDYKLDFFRQQMQDFFLAH KDEEWFRSKYHPDEVGKRRQESRGALQ NRLRVFLSLMETGWFDNLLGH*TKLI AIVKMLDAAVIKMEGGTENDLRILEQEE EEEQAGKPGEPSKKEEGRAGAGLGDGE RKTNDKDEKKEDGKQAENDSSNDDKTK KSEGDGDKEKKEDSEKEAKKSSKKRN RKHSGDDSFDEGSVSESESESGQAEKE KEEAEALKEKEKPKEEWEKPKDAAG LECKPRPLHKTCSLFMRNIAPNISRAEIS LCKRYPGFMRVALSEPQERRFFRRGWV TFDRSVNIKEICWNLQNGARSLNIRWC SRGKGLRAAVSLASGLRECELSPGVNRD LTRVRNNGITQHKQIVRNDIKLAAKLI HTLDDRTQLWASEPGTPPLTSLPSQNPI LKNITDYLIEEVSAEEEELLGSSGGAPPEE PPKEGNPAEINVERDEKLIKVLDKLLLYL RIVHSLDYNTCEYPNEDEMPNRCGIIH VRGPMPPNRISHGEVLEWQKTFEKLT LLSVRESLSEEEAQKMGRKDPEQEVEKF VTSNTQELGKDKWLCPLSGKKFKGPEFV RKHIFNKHAEKIEEVKKEVAFFNNFLTD AKRPALPEIKPAQPPGPAQIIHVPVRVVL PPGLTPGLPYPHQTPQGLMPYGGQPRPIL GYGVPTGGPPYPHAPYGAGRGNYDAFR QGGYPGKPRNRMVRGDPRAIVEYRDL DAPDDVDFF
7487	15538	A	8133	188	391	

7488	15539	A	8134	1	998	MAVMLHSAKWPLPVLQOGLTMQPPLPS KHISERSEEDSRQPLYSVILIFYEAGFAIL VFDKTDFOQPKVKRDKEGHYIMVKGSM QQEELTILNIYAPNTGASSFIKQVLGDPQ RDLDSTHIIIVGDFNTPLSILDRLMRQKIN KDIQDLNSALDQVDLIDYRTLHPKSTEY TFFSAPHHTYSKIDHIIGSKTLLSKCKRTE IITNSLSDHSAIKLELRIEKFTQNHTTTWK LNNPLNDYWVNNEIKAEINKFFETNEN RDTMYQNLWDTAKAVFRGKFIALNGH RRK*ERSKINTLTLQLEKEKQEQTHTSKA SRRQEITKIRAELEIDS
7489	15540	A	8135	1	1674	
7490	15541	A	8136	3	361	
7491	15542	A	8137	3	174	
7492	15543	A	8138	3	326	
7493	15544	A	8139	1	82	
7494	15545	A	814	166	437	ADHLKSGV*DQPGQHGEILSLLKLQ*FPG RGG AHL*SQLGRLKQENHLNPGGGGC SEPRLCHWTPVRATVGDSVQKK*KSQD GPRAKLG
7495	15546	A	8140	2	372	
7496	15547	A	8141	1	352	
7497	15548	A	8142	2	395	
7498	15549	A	8143	4274	5256	HTLFGDKLCTVATLRETYGEMADCCAK QEPERNECFLOHKDDNPPLRLVRPEVD VMCTAFHDNGETFLKK*VIRCL*FKIKK HGVTP*ANTL*KLP*QKYFQH*DLEVLL* *FFKEVVFDTTKFYTAKNMIKDILKFIET GYNLSQKFIDKFFNVFRYVYMVVIID FVLVSNILPKFNHLCTHTHTHTLTLFST YLKNDRDKTIMCKLSLIG*LAESLEFGGS GENVDYNYFCNIVCYRK/ADCFSLKFR YLYEIARRHPYFYAPELLFFAKRYKA TECCQAADKAACLLPKVLCTRIEKKSL SNLILSILWLDLGLSV
7499	15550	A	8144	23	136	
7500	15551	A	8145	1	248	
7501	15552	A	8147	3	231	
7502	15553	A	8148	30	217	
7503	15554	B	8149	49	754	MAGAAPRLPWSRPHGSCGWWMQPLQ GPGRRAVAAAWEVATPVFMPVGTQAT MKASRPNSWTLWVAASAWEYLPSGSK AGGTAAFPDGVAGVSVRGDGGGLRFRS PYDGNETLLSPENPCRSRMRAWPGVVT GALLQVNPLAGPVHAAHQRPDKQNLFA IIQVGWTQISGPPALKRFGSAWHSRAFLT HCCTVTTRPCTTSRPQHRLPAELMSAV RTSIVEKRFPDSCGTSWAPX*
7504	15555	A	815	3	238	SGDRDHPG*HSETL SLLKIQIAGRGGG RL*SRLRLRLRQENGVSPPGGACSEPRS HHCTPAWETERDSVSKKKKKL
7505	15556	A	8150	1	593	RQSRWREQLPRLSWRLVPRIMRLVAEC GRSRARAGELWPHGTVATPVFMPVGT QATMKGITFEFLDALGCRICLGNTYHL GLRPGPELQKANGLPRLS*IWPSLILLN GTAAVFQMVSLVSLSEVTEEGVRFRSPY DGNETLLSPEKSVQIQNALGSDIIMQLDD VVSSTVTGPRVEEAMYSIRWLDRCICS H
7506	15557	B	8151	374	613	MTALDLFLTNOFSEALS YLKPRTKESMY HSLTYATILEMQAMMTFDPQDILLAGN MMKEAQMLCQRHRRKSSVTD SFSSL*

7507	15558	A	8152	2	1922	VETPPQGSVHSGHLGSSVVDGPHGTGTGN AGERGPRGKGARVLALDSGGMDSFSLP LIRTPESSLHEALDQCMTALDLFTNQFS EALSYLKPRTKESMYHSLTYATILEMQA MMTFDPQDILLAGNMMKEAQMLCQRH RRKSSVTDSFSSLVNRPTLGQFTEEEIHA EVCYAECLLQRAALTFLQGSSHGGAVRP RALHDP SHACSCPPGPRQHLFLLQDEN MVSFIKGGIKVRNSYQTYKELDSLVSQSS QYCKGENHPHFEGGVKLGVGAFNLTL MLPTRILRLLEFVGFSGNKDYGLLQLEE GASGHSFRSVLCVMLLLCYHTFLTFVLG TGNVNIEEAELKPYLNRYPKGAIFLFF AGRIEVIKGNIDAVSDGGPGRGWGSLGV SQTSRSGTCDILRDRIDWGRGGGPREN QPESRGRRGPSGRAAWEDKGGGGICGA WDFDWEI*DCSIAVEGGGGRCLEAEVR KAHLFRA*RLGWSLVPLHYSSLLLFHF VTKNQSPRRGLYLSPTSCKT*EVKPGLE ARSPGSWGPT*A*HRAGPLCPGGVPVCC GVGRFGGCRGVGAGWAPVRLTRRCLQ AIRRFEECEAQQHWKQFHMCYWEL MWCFTYKGQWKMSYFYADLLSKENCW SKVG
7508	15559	A	8153	1	285	
7509	15560	A	8154	3	409	
7510	15561	A	8155	1	390	
7511	15562	A	8156	17	221	
7512	15563	A	8157	2	366	
7513	15564	A	8158	1270	1692	
7514	15565	A	8159	2	261	RPRRSSSTS*SPH*PPAVAAAPSGAPPWG LSCPRRPRAPPAAAPPEALGQGPSTRG AAEVAGAAGSRPPQPFYSDFQSRFCCIKS
7515	15566	A	816	4005	4345	SQHFGRRPRADHLRSGVQDQPDQHGET PSLLGGRGGRITKSGDRDHPG*HGETPSL LKMQ/EKLAGRGGGRLWSQLLGRRLRQE NGVSPGGRACSEPRSCHCTPAWLTEQDS VSKK
7516	15567	A	8160	44	463	
7517	15568	A	8161	2	318	
7518	15569	A	8162	1	349	
7519	15570	A	8163	38	368	
7520	15571	A	8164	43	376	LSMANGPPHCTECTAFPRESGKNCKVCI FNTDGTLVAVRTGQKADIISVSSKGLLH SFYLLKAVCLEFSPKNTAL*TGLPYSTSK DATAGIPNLQLYDVKTGTCLKSFLQK
7521	15572	A	8165	22	192	
7522	15573	B	8166	852	931	MYSPPDPRTVKSGVDGAMLSRKEKPLG*
7523	15574	A	8167	1	202	
7524	15575	A	8168	2	330	
7525	15576	A	8169	1	281	AAWILKARALTEMVYIDEIDVDQEGIAE MMLDENAIA/PSSTPITQAGRPTGFLRPS TQSGRPGTMEQAIRTPRTAYTARPITSSS GRFVRLGT
7526	15577	B	817	1	9234	MGAPTLPPAWQPFLKDHRISTFKNWPFL EGCACTPERMAEAGFIHCPTENEPDLAQ CFFCFKELEGWEPDDPIEEHKKHSSGC AFLSVKKQFEELTLGEFLKLDREKAKNKI AKETNNKKKEFEETAKKVRAIEQLAA MD*

7527	15578	A	8170	1	769	QAAWILKARALTEMVYIDEIDVDQEGIA EMMLDENAIQVPRPGTSLKLPGTNQTG GPSQAVRPITSHSEKPIITGLRPSTQSGRP GTMEQAIPTPTAYTARPTSSSGRFVRL GTASMLTSPDGPFIN*SRLNLTKYSQKPK MAKALPEYIFHHENDVKTALELAALSTE HSQYKDWVWKVQIEKRYRGLGMYREA EKQIKSSLKQQEMVDTFLYLAKVYVSLD QPVTALNLFKQGLHKFPGEVTLTCGIARI YE
7528	15579	A	8171	2441	2706	FCFGLSCSLPPFFFFFEMESRSVAQAG VQWCDLSSLHPLPPGSSNAPASASRVAG TTGAYHQCLANFGFVFLVETGVSLCWL GWS
7529	15580	A	8172	1258	1733	ILFWIIQLNLECSEFSWRLRQGRGIMLFFF PFLFFFETESHVAQTGVQWCDLGLSLQP PPPGLSDSPALASSVSWITDVRHHLWLIF VFLVETGFRHVGQASLKLPTSGDLPTLA SQSAGITGVSHYAWLIFVFLVETEFHHV GQAGLELLAPSDPPA
7530	15581	A	8174	196	390	
7531	15582	A	8176	84	307	
7532	15583	A	8177	3	383	DIKILIASPSATHIHKETTRATSSPYRDTQ SRTASPNRAGKGVIEQTEKSHPRSPNVLS AALSQRITVPEEELNPKILALQNAQRKR KMEHDGSLFQAVGI/DLACRL/LGQSM ESGLPQLTSYDCEV
7533	15584	A	8178	2	691	
7534	15585	A	8179	2	202	
7535	15586	A	818	1577	2233	SGCLLSPPSVGRQNSPVELGGAGLSRAG WAPQERGRAALLLISPGPNVRGGPDWLP SVLQMRGLPLWDLGGRPDVGRMSPGGR PGSCWATQLRFHISLAPLFSWAGRSGS RLNPSTLGGRGGPITRSGDRDHPG*HGET LSLLKIQKISQACWR/CACSPSYGRLRQE NGVNPGGGACREQRSRGHCTPAWATEQD SVSKKKKKKSGSTIRLKHILHKII
7536	15587	A	8180	1	62	
7537	15588	A	8181	116	333	
7538	15589	A	8182	55	351	QWSYLPQVMFTGENIPVHPHVYSNGHI CLSILTEDWSPALSVQSVCLSIISMLSSCK EKRRPPDNSFYVRTCNKNPKKTKWWYH GKFEHRDIHKGKKM
7539	15590	A	8183	3	474	DGSIASMQKRLQKELLALQNDPPPGM TLNEKSVQNSITQWIVYMEGAPCTLYEG EKFQLLFKCRRRYPFDSSQGMFTGENIT DHPHVYSNGHMLCLSLTKNWFALSVQS VCLSIISMLSSCKEKTTHDPDNSFYVRT CNKNPKKTKWWYHDDTC
7540	15591	A	8184	1	232	
7541	15592	A	8185	3	367	
7542	15593	A	8186	1	203	
7543	15594	A	8187	2	333	ARVKRLGMFNIQHCKKLSSWVLLMKYL GNATAIFFLPDEGKLQHLENELTHDIITK FLAETFLHFPKLSITGTDLKSVLGQLGI TKVFSNGADLSGVTEEAPLKLSKAD
7544	15595	A	8188	1	853	EYRRFLVDRHLQLTTGNGLFLSEGLYL DKFLEDVGRLYHSEALTVNFGDTEEAKK QINDYVEKGTQGGKIVDLVKELDRDITVFA LVNYIFFKGKWERPFEVKDTEEDFHVD QVTTVKVPMMKRLGMFNIQHCKKLSSW VLLMKYLGNATAIFFLPDEGKLQHLENE LTHDIITKFLNEDRRSASLHLPKLSITGT YDLKSVLGQLGVTGVFGRGSQHEKRRT EATKECRKTQNNRGTERVATAT*THNQ KRKRAQQGNTREKENGKQREQGPFVFL MIEQN

7545	15596	A	8189	3	157	
7546	15597	A	819	151	454	FQKIGPGAVAHACNPSTLGGRSRRITRSG GRDHPG*HSETPSLLKIQKLAGRGGGCL *SLLWRLRQENGVPNGGGACSEPRSRH CTPAWVTERDSVSKKK
7547	15598	A	8190	3	362	
7548	15599	A	8191	3	333	
7549	15600	A	8192	174	361	
7550	15601	A	8193	1	1143	VRCRPVRNSRVDPRVRMAAVFLVTLYE YSPLFYIAVVFTCFIVTTGLVLGWFGWD VPVILRNSEETQFSTRVFKKQMRQVKNP FGLEITNPSSASITTGITLTDCLEDSLLTC YWGCSVQKLYEALQKHVYCFRISTPQA LEDALYSEYLYQEYFILSSDIPISTEN*T SYG*SVANLLIILGILEACLLQNKHSPCI RTCSVYRISVSGTGFAFRLIYPLALIIRL LMDKVPLTY*SFLGY*KHVYCFRISTPQA LEDALWSEYLYQEYHFIKKDSKEEYICQ LPRDTNIDDFGTVPRSRYPLVALLTSLDE DDREIYDIISMVSVIHIPDRTYKLSRILY QYLLLAQGGFHDLKQLFMSANNFTPS NNSSSE
7551	15602	A	8194	2	499	
7552	15603	A	8195	3	486	
7553	15604	A	8196	80	1281	LPAQKLDTCDEDETTALVCDNGSGLV KAGFAGDDAPRAVFPISVGRPRHQGVM VGMGQKDSYVGDEAQSKRGILTLKYPIE HGIITNWDDMEKIWHHTFYNELRVAPEE HPTLLTEAPLNPKANREKMTQIMFETFN VPAMYVAIQAVLSLYASGRTTGIVLDSG DGVTHNVPIYEGYALPHAIMRLDLAGR LTDYLMKILTERGYSFVTTAEREIVRDIK EKLCYVALDFENEMATG/PSIHPPMEKS YELPDGQVITIGNERFRCPTLAFQPSFIG MESAGIHETTYNSIMKCDIDIRKDLAYA NNVMFGGHPRLYPWEFADRMQERDSP ALAPQAPMEDQGFIRPRRSKYSVWIG RLPSWPSLSHLPKMWITEAGSTDEAGP FPSSNRKCF
7554	15605	A	8197	2	228	
7555	15606	A	8198	1	369	
7556	15607	A	8199	1	416	
7557	15608	A	82	999	1523	WEMVEIWSYSSSEQEHQIKLSYQRIKPL PHAHWWPFNPSPGLPPEASK*PPG*TLALGI FLGKKA*LQTFPLNYIRLENMQPRHGG CPVIPTLWKAEVGRSLELRLRPAWATR RNPISKPNPKLAGGARHL*SPGTPEAEV GGSEPE/GGRQGSSELRSRHCTPAWQHSE TPIS
7558	15609	A	820	1362	1647	
7559	15610	A	8200	2	396	
7560	15611	B	8201	1	555	MESTYMPINSGLDKENVESECKAYNPRP FCKTYTMDKQPLNTGEQKDMTEFFTDLI TKIEEMSPELSLRCEELHLHAENLSRRV WELMLLPTCPNMLMAFQNISDEQGSYS DLYPDSDDSSSEDQVENSKNWSCKISSN FTSSSKTIWYFSAVWEQLRYTLDNNVL KKS VIIQKDESSEYED*
7561	15612	A	8202	1	901	
7562	15613	A	8203	1	407	

7563	15614	A	8204	2	1149	PDLELPRARPQLVNSPGADKMETNSSLP TNISGGTPAVSAGYLFDDITYLVFAVTF VLGVLGNGLVIWVAGFRMTHTVTTISYL NLAVADFCFTSTLPFFMVRKAMGGHWP FGWFLCKFVFTIVDINLFGSVFLIALIALD RCVCVLHPVWTQNHRTVSLAKKVIIGP WVMALLLTLPVIIRVTTVPGKTGTVACT FNFSPWTNDPKERINVAVAMLTVRGIIRF IIGFSAPMSIVAVSYGLIATKIHKQGLIKV QVRP*GALSFAKKAFFLCWSPYQVVA P**PTSQESREVNCKGMYQRKLGIAVDV NKVPLAFFNS/CAFNPMVLVFMGQDFR ERLIHALPAKSGRGLTEDFNPKPVPQLT NSTLPSAEVALQAK
7564	15615	A	8205	2	386	
7565	15616	A	8206	2	294	
7566	15617	A	8207	541	711	SEVSAMVFLFFFF/CFEMESRSAAQAGV QWCNLGSLQALPPRFTPFSCLSLPSSWD Y
7567	15618	A	8208	2	1730	
7568	15619	A	8209	1	183	
7569	15620	A	821	10289	10708	SQHFGKLRQEDHLRSGVREQPGQHGKT PYLLKIQKLARRSGACL*SQLLRRLRQEN RLNPGGVGCSEPRLLHCTTAWTLQ*DPV SKKLKKKYIERQRYHQHMKHPWSTKIQ YVCMDG*HRSVEKQIIQTLCMFVFHTY
7570	15621	A	8210	3	320	
7571	15622	A	8211	2	198	
7572	15623	A	8212	110	363	
7573	15624	A	8213	1	849	
7574	15625	A	8214	1	993	
7575	15626	A	8215	23	627	
7576	15627	C	8216	79	171	MDISGTKCDFTVQVQLRFCLSETKATQP TN*
7577	15628	A	8217	3	630	
7578	15629	A	8218	1	188	
7579	15630	A	8219	1	2295	
7580	15631	A	822	662	766	
7581	15632	A	8220	143	5972	
7582	15633	A	8221	3	753	
7583	15634	A	8222	57	272	
7584	15635	A	8223	1	218	
7585	15636	A	8224	180	293	
7586	15637	A	8226	3	145	
7587	15638	A	8227	16	546	QLNGRSIRHEVMSHRKFSAPRHGSLGFL PRKRSSRHGKVKSFPPKDDPSKPVHLTA FLGYKAGMTHIVREVDRPGSKVNKKEV VEAVTIVETPPMVVVGIVGYVETPRGLR TFKTVFAEHISDE/CRLPLRQKKAHLME IHVNGGTVAEKLDWARERLEQQVPVNP VFGQDEMIDVI
7588	15639	A	8228	3	348	TRHIVREVDRPGSKVNKKEVVEAVTIVE NTPMVVVGIVGYV/ETPR/GLRTFKTVFA EHISDECKRRFYKNWNKSKIDLKFDTT SKLCHGRLQTMEKKAFMGPLKKDRIA KEEGA

7589	15640	A	8229	1	956	VNHAPAHASDGVMSHRKFSAPRHC SLG FLPRKRSSVRHRGKVKSFPMDDPSKPVH LTAF LGYKAGMTHIVREVDRI PGSKVN KK\EVVE\AVTIV*DTTHWC LLGIVGYVG NPSEGLRD/TFKTCLLLEHISY*MPRRRFL *RIWALKS*EGRPLPKYCKEIGKDED\GK KPAWK KDFQQH*KKLLAQVHPC SIAQT QMRL LPL\ RQK\KAHLMEIQV\NGGTVA RESWDWAREKLE\QQVPVNQVFGQDEM NDV\GVTKGK\GFKGVTRSWPTN*L PFK AHLGLSRVACFGAWH PARAHWHVAR AGQKGYQPYTLLVHSDL
7590	15641	A	823	749	853	
7591	15642	A	8230	1	375	
7592	15643	A	8231	1	399	
7593	15644	A	8232	2441	2706	FCFGLSCSLPFFFFFEMESRSVAQAG VQWCDLSSLHPLPPGSSNAPASASRVAG TTGAYHQCLANFGFVFLVETGVSLCWL GWS
7594	15645	A	8233	1275	1749	ILFWIIQLNLECSEFSWRLRQGRGIMLFFF PFLFFFETESHVAQTGVQWCDLGS LQP PPP\GLSDSPALASSVSWITDVRHHLWLIF VFLVETGFRHVGGASLKLPTSGDLPTLA SQSAGITGVSHYAWLIFVFLVETEFHHV GQAGLELLAPSDPPA
7595	15646	A	8234	3	200	DALAFVIKVFAAEEVDGCSVT TGS/HNH SVASGSNHRTRFCFTVYLSSIVSWRY*SC RCRECRGRAF
7596	15647	A	8235	1	1214	
7597	15648	A	8236	24	183	
7598	15649	A	8237	256	491	
7599	15650	A	8238	243	385	
7600	15651	A	8239	3	403	SCYGFNVRGQVSDGGQLRSINGEL YAP LQHNHVNVEGATHKQVVDLIRAREKEL ILTVLSVPPHEADNLYPSDDSLGQS FYDY TEKQAVPISVPRYKHVEQNGEKFVVYN VYMAGRQLCSKRYRQF AILHQNL
7601	15652	B	824	1	855	MDVVDPDIFNRDPRDHYDLLQRLGGGT YGEVFKLFAKCYTCIHTYDAMRV LFLM TKSGSQLPRLKEKGKWERVTGGRSAN VHYIIVYCESVHFLPILLPTLSTKPLSSPEL NAAASYVPFPIIHIDTAASMCYLFHMY VGVRAGGGIGDEIEDPAGDEYEL YRVVF DITFFFFVIVILLAIQGLIIDAFGELRDQQ EQVKEDMETKCFICGIGSDYFDTTPHGFE THLEEHNLANYMFFLMYLINKDETEHT GQSRALCRAFRGMRETGDLVRALKELA V*
7602	15653	A	8240	1	706	
7603	15654	A	8241	323	496	
7604	15655	A	8242	1	483	
7605	15656	A	8243	2	740	
7606	15657	A	8244	249	390	
7607	15658	A	8245	24	426	
7608	15659	A	8246	1	240	
7609	15660	A	8247	935	1150	
7610	15661	A	8248	190	584	
7611	15662	A	8249	201	364	
7612	15663	A	825	65	290	HLVSSLAKGKLAVRQAPFARVPPQHP*V KVKNWDPLLQPPPCRGLALKVTGCRVL GTEGLPHLKDFPIRAATQPL
7613	15664	A	8250	1	1122	

7614	15665	A	8251	1	1197	MHKDWVVFVDSGEHKEALLHELQLCDS TLKPAAHGQTRLVDLSLSEHKAQGTGA HVYEERHQVSVSRTDDVGCVPSECLAR ACGAEVGCSNIAYPKLVMELEMPI/GFSG AGDFPGPPLSNPLFLEAFDPSGLRGLMIA VMLAALMSSSLTSIFNSSSTLFTMDIWRRL RPRSGERELLVGRGTIPSTPPAPQSRLSF LLPETPPLERYLLGLVVMWLWLVIVALIG VSWAWIPVLQDSNSGQLFIYMQSVTSSL APPVTAVFVLGVFWRRANEQGAFWGLI AGLVVGATRLVLEFLNPAPPCGEPDTRP AVLGSIHYLHFGVALFALSGAVVVAGSL LTPPPQSVQIENLTWWTLAQDVPLGKA GDGQTPQKHAFWARVCGFNAILLMCVN IFFYAYFA
7615	15666	A	8252	1	624	
7616	15667	A	8253	88	627	
7617	15668	A	8254	3	437	
7618	15669	A	8256	220	415	
7619	15670	A	8257	2	359	
7620	15671	A	8258	1	1270	RTRGRTRGELVLESGEWRWLLERCRPG GAVALLILAAVVSICAVSQHAPPWTEDC RKSTYPPSRPTYRGAVPWDTH/VLVDLPP YKRWDELMLDMPV/LSKVIVNSLKNMI NTFVPSGKIMQVDEKLPGLLGNFPGP FEEEMKGIAAV/SLDIPLGEIISFNIFYELF TICTSIVAEDKKGHLIHRNMGMFGVFLV WNINNDTWVITEQLKPLTVNLDFQRNN KTVFKASSFAGYVGMLTGFKPGLFSLTL NERFSINGGYLGILEWILGKKDAMWIGF LTRTVLENSTSYEEAKNLLTKTKILAPAY FILGGNQSGEGCVITRDRKESLDVYELD AKQGRWYVQTNDRWKHPFLDDRR TPAKMCLNRTSQENISFETMYDVLSTKP VLNKLTVYTTLIDVTKGQFETYLRDCPD PCIGW
7621	15672	A	8259	108	988	TARGSKARSGGTRWSLGPSSSGGRRSW QPLVISRAV*H*GKSSRHQPLYSGHPLHG PVSHRGGPGPVRQPAAT*RPACASKLVQ PWH*WGP*LGSQLALAGHLCRTGCEES HHTCFPGYVKP*RL*ALPGGRP*VGER ARARPDEPREAAGFCGTEEQPHTDPAHP RLKRDCL/PSVSQAASVTTASAGFPPAW AASAGFPPTWTPNLSPATLGMQRSSCAL TFRRICRFLSDNKWMQRSITSMAIWICN GSGGSTSGRVFSSTLGGTDCSSSSLSKS ETFPSATSFSLR
7622	15673	A	826	230	652	GLSAPVAADPSLEPTPALHASIRPEADLQ P*PRTPLRSWGS/PGVRSRPTGDPGSGVT RLHRAIHQ/PITISSSTWVCTGPLCSVLIS PSQQESAPKRTVLEEHRLPRPPGAHADA HSGQLRAWPGQQREHGQEASQWEQHP
7623	15674	A	8260	1	319	
7624	15675	A	8261	19	373	AVFFFFFFFFFFFFFFFFFFFFFFFFFFFFF FFFFSSSSSSSSSSFFLFFFLKELRLVI *PLNPEN*ESCPLFSPVNLDMPTFKDKR WKVNWARSTSRQQLLESARTKSWAERE GGTRWRAW
7625	15676	A	8262	227	420	KNFLPNCSAKELFFFFFFFFFLLLLLLL LYFKF/MI*WFYKHLAFLLAFILSPAL* RGVFHH
7626	15677	A	8263	400	582	
7627	15678	A	8264	1205	1681	
7628	15679	A	8265	1	403	
7629	15680	A	8266	3	397	
7630	15681	A	8267	36	446	

7631	15682	A	8268	1	453	RHERHERHEELMTEGEDQFDVGSAAAR KEIIRNKIRAIGKMARVFSVLREESESVL LKGLTPTGMLPSGVLAGGRQTQSATVE AIEAEKAIRGFSPPHRCSFEEAKGLDRIN ERMPPRKDAVQQDGFNSLNTAHATENH GTGNHTAQ
7632	15683	A	8269	644	809	
7633	15684	A	827	108	1102	RMTQCLSECLICKFLSGKVTLGQAQWLT HVIPALWEAEAGRSPEVGRSRPSLAGMV KSRL/VLKIQKKKKKKKISRWWHMPV VPATWEAEAGELLEPGKA EVAARRDRA TALPAWGSQADGK*G*GLSAPVAADPSL EPTPALHASRRPEADLQP*PRPPPLRSWG SQVCEVPGLGTPPGSPASQSHPTSPYL PLPGSPARVPCARCSSRPASKRARQSAPC GRAPTSPAARGSRRTQRAAQLARSAA RTRTEASAVGTAPAAGRTGRGGPDKQE FVHGLVPLKQDNGRLQCTAQERAPRAR TLRHTARPAAFGVLDLGGNHVLPQ
7634	15685	A	8270	37	235	
7635	15686	A	8271	2	230	
7636	15687	A	8272	516	693	
7637	15688	A	8273	2	434	
7638	15689	A	8274	3	417	RQAWHKAGLHAADWAGRARSLLGDSH TSWSAGSIPGKHYQAVGLHLWKVEKRR VNLPRVLSMPPVAGTVCHAYDREVHLR CELSPGYYLAVPSTFLKDAPGEVLLRVFS TGRVLSAIRAVAKNTTPGAALPAVERG T
7639	15690	A	8275	308	614	HGSHGIALRPRQSQAPLVHKVCCFQEE QMGAPGKGPCEGSRICRLAQQGLGFHL VCLDRV*HLAPHCSLSLHGCGPHDVPFL VAKRSFLGLEPLSSPP
7640	15691	A	8276	11	161	
7641	15692	A	8277	163	437	
7642	15693	A	8278	1	660	
7643	15694	A	8279	2	1246	SCSAPEELCSLRPTLGARRGNCEAKVTG DRAFOICSVDLGAPPMLAARLVCLRTL PSRVFHPAFTKASPVVKNSITKNQWLLT PSREYAT*T*/RLGIRAWGELGQELKEGS IGNHSMGKNILKFDSGGEWLVAIGGA VVGLGSICAYLLALGL/GLN*DLGAI*KR L*FGPQYVKDRNHSTYMYLAGGVLGLT ALSAIAIQQNRLFFMELP*WRRLLGWTI GVDLWQPWLGAGMLVRSIPYDQSPGPK HLAWLLHSGVMGAVVAPLTILGGPLALIR AAWYTAGIVGGLSTVAMCAPSEKFLN MGAPLGSAGVSVFVSSIGI*CFPPPTD/T VAGATL\YSV\AMYGGISSFLSMFLLYDT PESKSSRAEVSPMYGVQKYDPINSMLS IYMDTLNIFMRVATMLATGGNRKK
7644	15695	A	828	241	1104	
7645	15696	A	8280	325	432	
7646	15697	A	8281	1	293	
7647	15698	A	8282	1	366	
7648	15699	A	8283	780	891	
7649	15700	A	8284	44	155	
7650	15701	A	8285	336	414	
7651	15702	A	8286	1	294	KLDTVVEFPIRGLNMSEFVCNMSARPYV YDLIAVSNHYGAMGVGHYKAAAYVLFY QRRDDEFYKTPSLSSSGSSDGGTRPSSSQ QGFGDDEACSMDTN
7652	15703	A	8287	302	486	
7653	15704	A	8288	1	620	
7654	15705	A	8289	1	804	
7655	15706	A	829	95	462	

7656	15707	A	8290	164	399	
7657	15708	A	8291	1	2226	
7658	15709	A	8292	876	1102	
7659	15710	A	8293	2	426	
7660	15711	A	8294	1	128	
7661	15712	A	8295	33	279	
7662	15713	A	8296	198	779	
7663	15714	A	8297	1	441	
7664	15715	A	8298	132	700	
7665	15716	A	8299	303	617	AKPSSGFECRSRAFLSKECGKQLGPSSSS ALSLSGSFFHLGAPS*PRTPRKSDGARCR PHPPSSMIGVQLLLGGCLAQHPHRAQL LDADVPTTISIKHVKGQP
7666	15717	A	83	2	448	LHCCPLQLKMOVACRAIGILSRFFAFRFLR SRGYICRNFTGSSALLTRTHINYGVKGD VAGARINSTNSKVNTLITELQSQFSQVM NEILSSYQIRRAVLISSEKPGCFIASSDINIL TACMTL*EVSHRSSEAQIIVQKLEMTTSL IVA
7667	15718	A	830	2	648	
7668	15719	A	8300	50	257	
7669	15720	A	8301	110	179	
7670	15721	A	8302	187	571	
7671	15722	A	8303	2	150	
7672	15723	A	8304	227	857	GDSRSRVTRRQDTAWNAWSASHCRRLS ASSRSPLTGPASVGGMAATGANAEKAES HNDGPVRLNPNIAKMKEDILYHFNLT SRH/NFPQALFGDVKFVCVGGSPSRNEK PSSGCR LGAE LGLDCPGRDYPNICAGTD RYAMYKVGPVLSVSHGMGIPISIMLHE LIKLLYYARCSNVTIIRIGTSGGIGLEPGT VVITEQAVDTCFK
7673	15724	A	8306	1	714	
7674	15725	A	8307	225	382	
7675	15726	A	8308	2	862	FLSVLPHSRALLTPKRAPKKKMAISGVP VLGFFI AVLMSAQESWAIKEEHVIIQAEF YLNPDQSGEFMFDGDEIFHVDMAKK ETVWRLEEFGRFASF EAQ GALANIAVDK ANLEIMTKRSNYTPITNVPPEVTVLNTP VELREPNVLCIDKFTPPVVNVTLWRNG KPVTTGVSETVFLPRIEDHFFRKHFHYLP FLPSTEDVYDCRVEHWGLDEPLLKH EFDAPSPLPETTENVV CALGLA VGLVGI IIGTIFHHSRELKRSNCRQKRKGGLCKAQ WR
7676	15727	A	8309	2	223	
7677	15728	A	831	90	401	
7678	15729	A	8310	1	3252	MELSVTLVSRAPRPLPVFRQLNTAIAVS QMSSGQCRLAPLIQVIQDCSHLYHYTVK LLFKLHSCLPADTLQHRDRFHEQFHSL RNFFRRASDMLYFKRLIQIPRLPEGPPNF LRASALAEHIKPVVVIPEEAPDEEENLI EISTGPPAGEPVVADLFDQTFGPPNGSV KDDRDLQIESLKREVEMLRSELEKIKLEA QRYIAQLKSQVNALEGELEEQRKQKQK ALVDNEQLRHELAQLRAAQLEGERSQ
7679	15730	A	8311	3	3253	
7680	15731	A	8312	1	673	
7681	15732	A	8313	177	393	
7682	15733	A	8314	177	400	
7683	15734	A	8316	1	473	

7684	15735	B	8317	549	602	MWWNSLDGIRNIVLSNPKKRNTLSLAM LKSLQSDILHDADSNDLKVIII SAEGPVFS SGHDLKELTEEQGRDYHAEVFQTC SKV MMHIRNHPVPVIAMVNGLATAAGCQLV ASCDICRGERQDLFCHSWVPRKVALEM LLTGEPISAEALLHGLLNKGGPEAELOE ETMRIARKIASLSRPGVSLGKATFYKQLP QDLGTDYYLTSQAMVDNLALDRQEGI TAF LHKRPVWSHEPV*
7685	15736	A	8319	272	364	
7686	15737	A	832	276	488	
7687	15738	A	8320	1	322	
7688	15739	A	8321	37	344	
7689	15740	A	8322	3	412	
7690	15741	A	8323	37	438	
7691	15742	A	8324	2	424	
7692	15743	A	8325	543	848	
7693	15744	A	8326	2	242	
7694	15745	A	8327	2	246	
7695	15746	A	8328	294	402	
7696	15747	A	8329	259	350	
7697	15748	A	833	186	537	IWFPLRRRKARQEEKSGLGAPRSPSHNY PPGYLGCLGKTNTS*TYILDQSNIGKRVA AILN*ILGGRKLRLEKSLSCQPKVEELYE RVAW/IP*KPGCLLLVSVKVRNVFDWCT WVY
7698	15749	A	8330	2	409	RPPPPVSSVPGPGRDQLGVTPLSGRHSLL CCWVRIVFPESDGAP*MASFPPRVNEKEI GKLLNLVDHTEVVRDLTFAPDGLILV SASRDKTLRVWDLKDDGNMMKVLRGH QKLVSFAFSPDSSMLCSVGASKA
7699	15750	A	8331	453	684	SLRFVLSVFCQSLLLGKAESSKYDTRETP KAWKESAAPELLGWAHSSGLTCDIKCC RARDLPWSPGPKIHTSVMCPSS
7700	15751	A	8332	1	92	
7701	15752	A	8333	67	301	
7702	15753	A	8334	3	276	
7703	15754	A	8335	1	564	
7704	15755	A	8336	1	364	
7705	15756	A	8337	3	103	
7706	15757	A	8338	1	744	
7707	15758	A	8339	3	266	
7708	15759	C	834	79	405	MIGGTPQMFFISGAKQWSPSLQPPRA HRSSPWAPSSKSTSGGTAALGSLGSKDY FPRTGDGVVELRRSDQRRHLPGCPTVL RTLTPQQRGDRDLQQLRHHELRS*
7709	15760	A	8340	481	637	
7710	15761	A	8341	1	3335	LNLKFEIEVLCKNLALDINELKPGNLKD KDRLKNLDEQLSAPKDKVKQPEELPITT TTTSTPATNTTCTATVPPQPQYSYHDIN VYSLAGLAPHITLNPITPLFQAHPLKQC VRQAIERAVQELVHPVVDRSIKIAMTTC EQIVRKDFALDSEESRMRIAHHMMRN LTAGMAMITCREPLMSISTNLKNSFAS ALRTASPPQREMMDQAAAQLAQDNCE LACCFIQKTAVEKAGPEMDKRLATEFEL RK
7711	15762	A	8342	1	520	KMDSTEPPYSQKRYEEIVKEVSTYIKKIG YNPDTVAFVPISGWNGDNMLEPSANMP WFKGWKVTRKDGNASGTTLEALDCIL/ PPTRPDKPLRLPLQDVYKIGGIGTPVG RVETGVLKPGMVVMHHEALSEALPGD NVGFNVKNVDVKDVRNGAGDSTNE PTMEANGFT
7712	15763	A	8343	1	443	

7713	15764	A	8344	41	665	
7714	15765	A	8345	2	394	ADIERLRMRVMAAATHASISGWNGD NMLEPSANMPWFKGWKPTRKDGNASG TTLLEALNCGIGTVPVGRVETGVLKPG MEVTFAPGNVTTEVKSVEKHHEALSEAL SGDNAGFNVKNVSVKDVRRGNV
7715	15766	A	8346	1	461	MLLEALDCILPPTRPDKPLHLPLQDVY KIGGIGSVPVGRVETGVLKPGMVVTFAP VNVTTTEVKSVEMHHEALSEALPGDNVG FNVKNVSVKDVRRHGNVAGDSKNPPM EAAGRFAVRDMRQTVAVGVKAQVDDK AAGAGKVTKSAQKAQKAK
7716	15767	A	8347	1	743	
7717	15768	A	8348	208	945	NWFKGWKPTRKDGNASGTTLLEALDCI LPPTRPDKPLRLPLQDVYKIGGIGTVPV GRLETGVLKPGMVVTFATVNVITEVKS VENHLVAPLDCPRTAFGPTRPSTYIKKIG YYPDTLAFEPISGWNGDDMLEPSANMP WFKGWKPTRKDGNASGTTLLEALDCIL PPTRPDKPLRLTIQDVYKIGGIGTPTVG RVETGVLKPGMVVTFAPVNGTT*VKS AMHHEALSEAHSDNVGFNVKNV
7718	15769	A	8349	1	1434	RGITIDISLWKFETSKYYVTIIDAPGHRDF IKNMITGTSQADCAVLIVAAGVGEFEAGI SKNGQTREHALLAYTLGVKQLIVGVNK MDSTEPPYSQKRYEEIVKEVSTYIKKIGY NPDTVAFVPISGWNGDNMLEPSANMPW FKGWKPTRKDGNASGTTLLEALDCILP TRPTDKPLRLPLQDVYKIGGIGTVPVGR VETGV/LFVPISGWNGDNMLEPRANMP WFKGWKPTRKDGNASGTTLLEALDCILP PTRPTDKPLRLPLQDVYKIGGIGTGPVGR LETGVLKPGMVVTFAPGNVTTEVKS VETLHEALSEAFPGDNVGFNVKNVSVKDV HGNVAGDSKNPPMEAGFTAQVILNH PGQISTGYAPVLDCHTAHIACKFAELKE KIDHRSGKKLEDGPKFLKSVDAAIVDMV PGKPMCYESFSDYPSLGCFAVRDMRQIV TVGVKAQVDDKTAGAGKVTKSAQKAQK AK
7719	15770	A	835	1	321	
7720	15771	A	8350	1	1254	
7721	15772	A	8351	1	1195	
7722	15773	A	8352	1	2471	MGKEKTHINIVVIGHVDSGKSTTTGHLIY KCGGIDKRTIEKFEKEAAEMGKGSFKYA WVLDKLKAERERGITIDISLWKFETSKY YVTIIDAPGHRDFIKNMITGTSQADCAVL IVAAGVGEFEAGISKNGQTREHALLAYT LGVKQLIVGVNKMDSTEPPYSQKRYEE MWLREVSTYIKKIGYNPDTVAFVPISGW NGDNMLEPSANMPWFKGWKPTRKDG NASATTLEALDCILPPTRPDKPLRLPL QDVYKIGGIGTDPAGRVKTGVLKPGMV/ VAPFAPVNGTTEVKSVEMHHEALSE/AL LLGDKGAFNVKNVSVKDVRRGNVAGD SKNDPPMEASGFTAQVILNHPASQKNAR HMPLELDCHTAHIACKFAELKEIDRRS GKKLEDGPKFLKSGDAAIVDMVPGKPM CVESFSDYPLGRFAVRDMRQTVAVGVI KAQVDDKKAAGAGKVTKSAQKAQKAK
7723	15774	A	8353	184	819	ETEIKMASRGKTETSCLKQNLEEQDLRL MQQLQDLEECREELDTDEYEETKKETLE QLSEFNDSLKKIMSGNMTLVDELGMQL AIQAASQAFKTPKVIRLCGKK/HHPVQL RPR*AEMDRDLMVGKLERDLYTQQKVE ILTALRKLGEKLTADDEAFLSANAGAILS QFEKVSTDLGRPPSYMNYLLDSHPSKNI DVPSKISFLLKIQDL

7724	15775	A	8354	1	387	
7725	15776	A	8355	3	1022	FLASLQWVQTSSFSSEKFVITDLLKPTSV NLSKSFSVQLCSIAAGSLRPTPEIQEVKTP EELETFMLKHGENIIDTLGAEVDRLEKEL KSGSLVPCIPAAPAVTKRGQGTAPAIASV GGSPKPWQLPRGVGPVGAQKSRTTEVWK SLPRFQRMYGKHLDAQNDRSTDLSHSAP GKATDTQCQLKAAKSGLYPAELKRWS CPWLWEPTFCISVTWSDLEQLRKIRRRSP HEDTESFTVYLRSDVEAKSLEVWGSPEA LAREKKLRKEAEIEYREKGSINSATLI/EF SRYLSDTRY/RTRSCAWCLKCICKIIPTM ANSCSPNTCSLCLLYSSPALPWTLKFA
7726	15777	A	8356	4	516	
7727	15778	A	8357	1	248	
7728	15779	A	8358	3	4135	
7729	15780	A	8359	2	417	
7730	15781	A	836	101	290	
7731	15782	A	8360	43	239	
7732	15783	C	8361	141	356	MSFDCGFGTLPLLLSPICCLGSYSNKVISP GLXXXXXXXXXXGGALLKDPWGGPIFP GGGKKFFFLFGGGF*
7733	15784	C	8362	22	159	MRGVFPLFPLKXXXXPKGLKXXXXGPI MSPPQKKVPFQKSQGGF*
7734	15785	A	8363	64	240	TLKFWKEGGPPIPPQKKGPFPKIPRGGL *GPPKKKKNFSPFPVKLGPPKGFKRAP P
7735	15786	A	8364	19	471	
7736	15787	A	8365	3	399	
7737	15788	A	8366	186	840	
7738	15789	A	8367	7	633	PTITNVWSETSQELADGLRRGSQGDSVQ QNGPPRKHIVERYTEFYHVPTHSDASKK RLIEDTEDWRPRTGTTQSRFRILAQITGT EHLKESEADNTEKANNSQEPSPQLASSV ASTRSMPELDSPTSGRPGVTSLTTAAAF KPVGSTGVKSPSWQRPNGQVPSTGRISN SAAYSGSVAPANSALGQTQPSDQDTLVQ R*PTITNVWSETSQELADGLRRGSQGDS VQNGPPRKHIVERYTEFYHVPTHSDAS KKRLIEDTEDWRPRTGTTQSRFRILAQI TGTEHLKESEADNTEKANNSQEPSPQLA SSVASTRSMPELDSPTSGRPGVTSLTTA AAFKPVGSTGVKSPSWQRPNGQVPSTG RISNSAAYSGSVAPANSALGQTQPSDQD TLVQRAEHIPAGN
7739	15790	C	8368	78	386	MTHLEAQNKIKGCTGSLNMTLQRASAA PKPEPGSCSKAHSHQVRFRDFSGASRG REEDPRVTNTQNGKIPPKRPPKPHCG ALYRVLSCHTFTVMPARRD*
7740	15791	A	8369	20	442	
7741	15792	A	837	21	215	
7742	15793	A	8370	49	354	
7743	15794	A	8371	239	401	
7744	15795	A	8372	141	351	
7745	15796	A	8373	239	474	MRMVTWWRGVFLATSPSPRPSQLEKQ YTALYRKATSPN*FAPNCYPDPQPHLG* LAPVAHVPL*QRRKAESPSSN
7746	15797	A	8374	1	740	MVSDIRKEDGMNVLPKYIPNVGVNFSS AGVYLASETLPGSFAHPEATSRGAVATG TTHLASAVEPNGDSWCKQSRPRVSVHYI RINITGWVCTCCDIERNIMLSPLNIRNNI TARLRPKTGTMPLREQRYTGIDENAHV VERRVF/RVPALHLRRPSQLEKQYIALYR KATSPN*FAPNCYPDPQPHLDRLAPVAH FPL*Q*RKAEPPSSN*VARGTCTS*LSKP RTVWKDPVARNRPPVGPT

7747	15798	A	8375	803	985	
7748	15799	A	8376	1	319	
7749	15800	A	8377	339	808	GSQSQQGNRGWFSVPASRGVPPPAVMG VLRARGGRGAGSQSPPPGGCLPPMRWG SGATRSGLGLWWETSDGLETPSRWWG SS*TL/GGSPVQVY*LVTPDSGSSH*KANS FCLSGDNLIGKKASFRSKQVNLSSAGS KPNNDGLGTVGCKVSA
7750	15801	A	8378	588	2278	GWAHGGEACFCVPALHLCRPSQLEKQY PVLY*KATSSN*FAPNYYDP*PHLG*LP PW
7751	15802	A	8379	779	986	ELQLYWLCKKPPIDIRSHWKSC*AGISTS RLCQLLPKR*GSGVLPADSMRGRKVS SAWHRSLWSSPL
7752	15803	A	838	158	955	KMTSSSEQEEDKNNQSATPRQTGPATT MNSKGQYPTQPTYPVQPPGNPVYPQLH LPQAPPYTDAPPAYSELYRPSFVHPGAA TVPTMSAAFPQASLYLPMASVAVGPL VSTIPMAYYPVGPIYPPVSTVLGGKGG YDAGARFGAGATAGNIPPPPGCPPNAA QLAVMQGANVLVTQVRKGNFFMGGSDG GYTHLVRNQGHLCAREKTSHTLQHFSQ CNCFSHINLKLQFRHMLLGLCSGAQTR HFSNLIRNHVMVA VPP
7753	15804	A	8380	179	795	PAFFLIPGCAPPVG**IPSNVPAVGRSDF SWTPYTHSPPDAGVEHPFWRLPWG VPAKGHQRGTGATRS LGFWWDTSGLLEP TPPRRWGSS*TLEEARSKCTE**HLTPD LPTERTASGSQGRI*C*RKHLS/WSKQV KQLSSAGSNPSNVYGLG/DCWM*SHCSL LNQAQLSRPVVLGLRLGNRQEGSVPW LTRNYHSGKS
7754	15805	A	8381	1	1029	
7755	15806	A	8382	989	2798	
7756	15807	A	8383	2	396	
7757	15808	A	8384	3	1773	PGGRQQAE GIMVQYELWAALPGASGV ALACCFVAAVALRWSGRRTARGAVV RARQKQRAGLENMDRAAQRFLQNPDL DSEALLALPLQLVQKLHSRELAPEAVL FTYVVGKAWEVNKGTCVTSYLADCETQ LSQAPRQGLLYGVPVSLKECFYTKGQDS TLGLSLNEGVPACDSVVVHVLKLQGA VPFVHTNVPQSMFSYDCSNPLFGQTVNP WKSSKSPGGSSGEGALIGSGSPLGLG TDIGGSIRFPSSFCGICGLKPTGNRLSKSG LKGCYVQGEAVRLSVGPMARDVESLAL CLRALLCEDMFRLDPTVPPLPFREEVYTS SQPLRVGYETDNYTMPSPAMRRVLE TKQSLEAAGHTLVFPLPSNIPHALETLS GGLFSDGGHTFLQNFKGDFVDPCLGDLV SILKL PQWLKGLLAFLVKPLLPRLSAFLS NMKSRSAGKLWELQHEIEVYRKT VIAQ WRALDLDVVLTPMLAPALDLNAPGRAT GAVSYTMLYNCLDFPAGVVPVTTVTAE DEAQM EHYRGYFGDIWDKMLQKGMKK SVGLPVAVQCVALPWQEEVCLRFMREV ERLMTPEKQSS
7758	15809	A	8385	660	772	
7759	15810	A	8386	27	372	
7760	15811	A	8387	685	769	
7761	15812	A	8388	305	425	
7762	15813	A	8389	308	410	
7763	15814	A	839	217	491	
7764	15815	A	8390	3	501	
7765	15816	A	8391	4	318	
7766	15817	C	8392	340	474	

7767	15818	B	8393	317	702	LAEWRPREPMQRKLKVTSLPGTVVITE QAVDTCFKAEFEQIVLGKRVIRKTDLNK KL VQELLCSAELSEFTTVVGNTMCTLD FYEGQGRLDGALCSYTEKDKQAYLEAA YAAGVRNIEMESSVFAAI*
7768	15819	A	8394	209	581	
7769	15820	A	8395	227	1302	GDSRSRVTRRQDTAWNAWSASHCRRLS ASSRSPLTGPASVGGMAATGANAIEKAES HNDPCVRLNPNIAKMKEDILYHFNLT SRHNFPFLFWFKFGLFGGNPSRMKPF RCLGPEIGLDCPVRDYPNICAGTDYAM YKVGVPVLSVSHGMGIPSISIMLHELKLL YYARCSNVTIIRIGTSGGIGLEPGTVVITE QAVDTCFKAEFKQIVLGKRVIRKTDL NKKL VQELLVSAELSEFTTVVGNTM CTLDFYEAGQGRLDGALCSYTEKDKQA YLEAAYAAARVPQLFEMESSVFAAMCS ACGLQAADVVCVTLNRLLEGDQISSPRN VLSEYQQRPQRLVSYFIKKKLSKA
7770	15821	A	8396	3	337	
7771	15822	A	8397	2	375	NHEKDDNSLKIISNASCTTNWLTPLAKGI HDNFGIVEGLMTTVHAITATQKTGDGPS GYNWGVMAAGLSKTSSLPLLG/LGKAGG KVIPELNGKLTGMAFRVPTGNVAGVDLT CRLKKPGKYDDIK
7772	15823	A	8398	3	1141	IRHEVRQSAASSFASPAEHRSDTMGKV KVG VNGFGRIGRLVTRAAFN SGKVDIVA INDPFIDLNYMVYMFQYDSTHGKFHGT VKAENGKLVINGNPITIFQEPKIPSKIV GGDAGRLKYVVEFH LAVFTTMEKGLG ASFRCRGGAKRVNQLPPSG*CPPCFGHG V*TIEKYDNSLKIIISNASCTTNCLTPLA KVIHDNFGIVEGLMTTVHAITATQKT GWALPGNCGVMGPRGSSRTSSLPLAA AKAVGKVNPLSLNGEAHLGMGFRVPN ANVSVDLTCRLEKPAKYDDIKKVVK QASEGPLKGILGYTEHQVSSDFNSDTH SSTFDAGAGIALNDHF/VSR LISWYDNEF GYSNR/VVDLMAHMASKE
7773	15824	A	8399	1	374	
7774	15825	A	84	247	287	KRGFVLPPGLECGGPIWVNGR/LRLGLP PFGSLSPGSDYDGLPPGRVKIWHFLE KRGRGVARVGSTLLTGEPVLF*KPPF F
7775	15826	A	840	1789	2411	KTYWRKKVEKVVVSNRVLVTSPACIVTS TYGWTANMGENH*KLQALKETTSTMG/ YYMASQRKHRGIKPLTSLIEYLKAKRPE GLIRTDKSVKDLVILLYETALLSSGFQS WKIPRHH*QVSYRMIKLAGLIGEDG PYLLDDTSAAVNLKELPPLEGDDDTFTHG KEVGLILLGLRGWTLPSVLYNSSDNIF FQGCFLFLVNI
7776	15827	A	8400	127	420	
7777	15828	A	8401	3	509	KNRIKKISNLENLKS LVDLHGNQITKI ENINHLCELRVLNLARNFLSHVDNLNGL DSLTELNLNRHNQITFVRDNDLPCLQHL FLSFNNISSFDSVSLADSSSLSDITFDGN PIAQESWYKHTVLQNMMLRH*DMEGE FTGRRKGVWHLF*PKKGGKRKEPGKS
7778	15829	A	8402	2	384	
7779	15830	A	8403	1	430	ERVGNVCSLEISNIQKGEYMECHAVN IIEGAKSFANVDIMPQEERVVALPPPEFC RSKYGFKGGRRQRTKN*FRUFEMPPRFI MPICDFKIPENS DAVFKCSVIGIPTPEVK WYKEYMCIEPDNIK YVISEEKGSHTLIR
7780	15831	A	8404	1	12064	
7781	15832	A	8405	2	383	
7782	15833	A	8406	1	1677	

7783	15834	A	8407	2	2580	GQKKLVLIINKSDLPKENLESWLNLYLK KELPTVVFRAS TKPKDKGKITKRVKAKK NAAPFRSEVCFGKEGLWKLLGGFQETCS KAIRVGVI GFNPVKGSSIINSLKQEQMC NVGVHGGGLQGSMQV VPLDKQITIIDSP SFIVSPLNSSSALALRSPASNEVVKPMEA ASAILFQADVRQVVLKYTV PGLQGILW EFFTMLAQ RKEVWHQKGGV PKCLEGA AKLLWSEWTGASLAYYCHPPTS WTPPP YFNESIVVDMKSGFNLEEEKNNAQSIR GENCVSLLSSSADRPVELLPVYMGLLSFP AIKGPHLANSILFQSSGLTNGIIEEKDIHE ELPKRKERKQEEREDDKDSHETVDEEV DKKLD SMGSKRRRATSPSSSVSGDFDDG HHSVSTPGPSRKRRLSNLPTVDPIAVCH ELYNTIRDYKDEQGRLLCELFIRAPKRRT DSEIYEDAVELQFFIKIRDELCKNGEILL SPALSYTTKHLHNDVEKERKEKLPKEIEE DKLKREEEKRVEGIIQRLHYCTNPDSKPK YPAQRT PQIHLQGEVLFYESKFRTLEEVT VVLDTHIISINQPDY YEVVSQPIDLMKIQ QKLKMEEYDDVNLLTADFQLLFNNAKS YYKPDSP EYKAACKLWDL YLRTRNEFV QKGEADDEDDDEDGQDNQGT VTEGLLK ISITQKIRPVVILFHYGESWNLLRADQR LI FAKSWPRASRYQQGHQDLFILRSDLPSQ VFIRDKLMERRNRRTGRTEKARIWEVTD RTVRTWIGEAVAAAAADGVTFSPVPTP HTFRHSYAMHMLYAGIPLKVLQSLMGH KSISSTEVYTKVFALDVAARHRVQFAMP ESDAVAMLKQLS
7784	15835	A	8408	2	259	
7785	15836	A	8409	1	257	
7786	15837	A	841	225	336	
7787	15838	A	8410	3	365	
7788	15839	A	8411	2	243	
7789	15840	A	8412	2	339	
7790	15841	A	8413	2	182	
7791	15842	A	8414	2	381	
7792	15843	A	8415	59	572	SGRPFFFFFSATGACLFPPGPGR LGAEY RQRHWGTWVWHGLELGR LGSNREGCA RACRDWSHP PRTERGPSGHGGITSARLG TGTGERLRSGCVQGLVGMGRPVD RAC* SVLEPGGTPGRANWALDVEKLG NKY*E NKSLWVSRP/RQRCD CRQDRPWERPRLQ VTPIARQ
7793	15844	A	8416	3	1735	
7794	15845	A	8417	2	441	
7795	15846	A	8418	412	569	
7796	15847	A	8419	2	2812	RGLAVFISDIRNCKSKEAEIKRINKELANI RSKFKGDKALDGYSKKKYVCKLLFIFLL GHDIDFGHMEAVNLLSSNRYTEKQIGYL FISVLVNSNSELIRLINNAIKNDLASRNPT FMGLALHCIA SVGSREMAEAFAGEIPKV LVAGDTMDSVKQSAALCLLRLYRTSPD LVPMGDWTSRVVHLLNDQHLGVVTAA TSLITTLAQKNPEEFKTSVSLAVSRLSRIV TSASTDLQDYTYFVPAPWLSVKLLRLL
7797	15848	A	842	610	834	
7798	15849	A	8420	2	397	
7799	15850	A	8421	3	438	
7800	15851	A	8422	3	354	
7801	15852	A	8423	3	339	
7802	15853	A	8424	1	338	
7803	15854	A	8425	1	70	
7804	15855	A	8426	62	374	

7805	15856	A	8427	2	374	
7806	15857	A	8429	1	342	
7807	15858	A	843	36	351	
7808	15859	B	8430	212	587	MGKGSFKYAWVLDKLDKADRERGITIDIS LGKFETSKYYVTIIDAPGHRDFIKNMITG TSQADCAVLIVAAGVGEFEAGISKNGQT REHALLAYTLGVKQLIGGVTKMDSTEPP FRRKRYEEIVKGX*
7809	15860	A	8431	1	1386	
7810	15861	A	8432	66	1574	KLTPKPKWESVKTHINLAIVIGHVDSG KSITTTGHLIYKCGGIDTKNHLKNLTKEA AEMGKGSFKYAWVLDKKAERERGITI DISLWKFETSKYYVTIIDAPGHRDFIKN MITGTSQA*PGLGGPLFGG/CSPLIVAAG VGEFEAGISKNGQ\TREHALLAYTLGVK QLIVGC*QKWDST\PTPTAQKKILKEIV K/EKVSTFH*RKFGYNP\DTVAFVFNFLV W\NGDNMLGAQVPNMPWFQGDGKVTR KD\GNASGTTLLWRALDCILP\TRPTDQ APLR\LPFQ\DVLPKIGGYLGTWFLVWPE WETGVL/RNPGMGVTF\APVNVTTTEVKS VEMHHEALSEALPGDNVGFNVKNVSV KDVRGNVAGDSKNDPPMEAAGFTAQ VIILNHPGQISAGYAPVLDCHTAHIACKF AELKEKIDRRSGKKLEDGPKFLKSGDAA IVDMVPGKPMCVESFSDYPPLGRFAVRD MRQTVAVGVKAVDKKAAGAGKVTKS AQKAQKAK
7811	15862	A	8433	2	265	
7812	15863	A	8434	3	318	
7813	15864	A	8435	2	896	VGPRGMWRAGSMSAELGVGCALRAVN ERVQQA\ARRP\RGDLP\AIQ\RLV\AVSK TKPADM\VIEAY\GHGQRT\FGENY\VQEL\ LEKAS\NPKILSLCPEIKWHF\IGHLQKQN VNKLMA\VPNLFML\ETV\DSVKL\ADKV NSSW\QRK\IGSPERLKVMGPGFN\TSREEI YLF\SVSLLEGKHGLPPSETIA\VEHNAK C\PNL\EFVGL\MTL\G\SFGH\DSQGP\NPD FQLLLSLPEETVVKS*RI\PADQVELSMGL SADM\QHAVEVR\STDV\WIRSTV\FGEPDY SKKPTPDKCAADV\KAPLEVAQEH
7814	15865	A	8436	202	349	
7815	15866	A	8437	1	129	
7816	15867	A	8438	3	387	
7817	15868	A	8439	505	693	
7818	15869	A	844	3	259	
7819	15870	A	8440	46	3454	AGESIMDTDL\YDEFGNYIGPELDSDEDD DELGRETKDL\DEMDDDDDDDDVGDH DDHPGMEVVLHEDKKYYPTAEEVYGPE VETIVQEEDTQPLTEPIIKPVKTKKFTLME QTLPTV\YEMD\FLADLMDNSELIRN\VT CGHLHHGKTCFVDC\IEQTHPEIRKRYD QDLCYT\DLFTEQERGVG\IKSTPVTV\VL DTKGKSYLFNIMDTPGHVNF\SDEV\TAGL RISDGVVLFIDAAEGV\MLNTERLIKHAV QER
7820	15871	A	8441	2	639	
7821	15872	A	8442	60	345	
7822	15873	B	8443	26	384	MHHEALSEALPGDNVGFNVKNVSVKDV RRGNVAGDSKNDPPMEAAGFTAQVIILN HPGQISAGYALYWIAIVDMVPGKPMCV ESFSDYPPLGRFAVRDMRQTVAVGVKA VDKKAAGLAS*

7823	15874	A	8444	33	99	KLPLKAKMGKEKTHINIVVIGHVDSGKS TTTGHLYKCGGIDKRTIEKFEKEAAEMG KGSFKYAWVLDKLKAERERGITIDISLW KFETSKYYVTIIDAPGHRDFIKNMITGTS QADCAVLIVAAGVGEFEAGISKNGQTR EHALLAYTLGVKQLIVGVNKMDSPEPPY SQKRYEEIVKEVSTYIKKIGYNPDVAFV PISGWNGDNMLELACSNMPWFKGMKIV TRKDGNAISGTTLEALDCILPPTRPDK PLRLPLQDVYKIGGIGTVPVGRVETGVL KPGMVVTFAPVNVTTTEVKSVMHHEA LSEALPGDNVGFNVKCVVSRMFRRGN VAGDSKNDPPMEAAGFTAQVILNHPIS QKNARHMPLELDCHTAHIACKFA*A*RK RFDRRSGKKLEDGP*NSLKSG*CWPLV DMVPWASPMCV*EASQDYPPLGRFWPF RYMRQTALRLGVNQQLDKKAAAGIAG KVHQSIAQKA*KPKWERKRLISTLSSLD T
7824	15875	A	8445	2	442	
7825	15876	A	8446	76	413	
7826	15877	A	8447	524	954	
7827	15878	A	8448	3	206	
7828	15879	A	8449	3	206	
7829	15880	A	845	3	661	
7830	15881	A	8450	3	327	
7831	15882	A	8451	56	324	
7832	15883	A	8452	33	159	
7833	15884	A	8453	2	494	
7834	15885	A	8454	130	716	LFARLPEAIPWROGKESSAQIRLEPPSRA QGETGFSWLGPDTHSRFWWWLGL/CG EGWAGIPLCFFSPRKYNTPITRDFLGPPL TGQGNKKTNRSSQTLPIEKPLSL*KL PSLRERE*LFIGLGVRAVSPGSLISGLGA QACPQ/GLPCLCLYPCLRGPGQDFPNQPR PQHPPSPQKPPSSFPHGSYVESLF
7835	15886	A	8455	1	578	GGRSVLPVDPVRVSRHFPMTHTGNTGLSAG LDASAQTTASHELTIPNDLIGCIIGRQGAKI NEIRQMSGAQIKIANPVEGSTDRQVTTTG SAASISLAQYLINVSLENAPSSQAASVTI PDHLSINLSQPSTPSSSFSTTTPSLATAG TSDAPSSLPNPSSDRPLCLQSAWHETHPF PGSPPPRLLLPTPPL
7836	15887	A	8456	2	875	IITLAGPTNAIFKAFAMIIDKLEEDISSM TNSTAASRPPVTLRLVVPASQCGSLIGK GGCKIKEYTREYRGFRSKVAGDMLPNLT ERAVTIAGIPQSIIECVKQICVVMLETLSQ SPPKGVITIPYRPKPSSSPVILQGGQPYTI QGQYAIQPDLTKLHQLAMQQSHFPM HGNTGIQWHLNPASPRGSKAYWAGLAD ASAQTTSSWNSPFPNGFDWAGIIGAFKG AKINEIRQMSGAQIKIANPVEGSTDRQ VTUTGSAASISPGVNIINVRSLSEVTGGM GSS
7837	15888	A	8457	3	376	HSSGLGGGVMLVHDIRRNESHLDIFRE SAPGALREETLQRSWETKPGLLVGVPG MVKGLHEAHQLYGRLPWSQVLAFAAA VAQDGFNVTHDLARALAEQLPPNMSE FRETFLPFGRPPLPGS
7838	15889	A	8458	1	1965	
7839	15890	A	8459	4	267	
7840	15891	A	846	33	382	
7841	15892	A	8460	10	464	TGPVAMGRVIRGQRKGAGSVFRAHVKH RKGAARLRAVDFAERHGYIKGIVKDIH DPGRGAPLAKVVFRDPYRFFKRTELFIA AEGIHTGQFVYCGKKAQLNIGNVLPVGT MPEGTIVCPVISKKVISSANRAVVGVA CGGRIDKRYKA

						GGGRIDKPILKA
7842	15893	A	8461	5	807	TGPVAMGRVIRGQRKGAGSVFRAHVKH RKGAARLRAVDFAERHGYIKGIVKDIH DPGRGAPLAKVVFRDPYRFKKRTELFIA AEGIHGTQFVYCGKKAQLNIGNVLPVGT MPEGTIVCCLGGEAWKTRGKLARASGN YATVISHNPETKKTRVKLPSGSKKVISS ANRAVVGVVAGGWPELTNP SLKAGRA YHKYKAK/RQRNCWPJRIRGVAMNPVE HTFGGGQ/HPQHIASPTTIRRDAP/AGRKV GLIAARRTGRLRGTKTVQEKEN
7843	15894	A	8462	11	349	
7844	15895	A	8463	305	676	RSKSDSAADLPSRRARLSGTGEKASENK GDPVHL*ADGGFVPLEDSL CM*FPAWAS SPSAALSIGLTVQVAGLQGLPWAPWVVP LGSTGRRSSGELEESEAGYLSTSSTDGLL GSFKEGCSSC
7845	15896	A	8464	352	784	
7846	15897	A	8465	3	381	
7847	15898	A	8466	1	233	
7848	15899	A	8467	3	356	
7849	15900	A	8468	2	374	
7850	15901	A	8469	2	482	KFQNALLVRYTKKVPQVSTPTLVEVSRN LGKVGSKCCKHPEAKRMPCAEDYLSVV LNQLCVLHEKTPVSDRVTKCTESLVNR RPCFSALEVDETYVPKEFNAETFTFHVK HKPKATKEQLKAVMDDFAAFVEKCKKA DDKETCFAEEGKKLVAASQAAL
7851	15902	A	847	21	371	APSPDAMGHFTEEDKATITSLWGKVNVE DAGGETLGRLLVVPWTQRFFDSFGNLS SASAIMGNPKVKA/HPENFKLLGNVLT VLAHFGKEFTPEVQASWQKMVTGVAS ALSSRYH
7852	15903	A	8470	2	435	
7853	15904	B	8471	73	384	MFLYEYARRHPDYSVVLRLAKTYETT LEKCCAAADPHECYAKVFDEFKLLVEEP QNLIKQAWRVQIPECAISSLHQESTPSVN SNSCRGLKKPRKSGQOML*
7854	15905	C	8472	11	475	
7855	15906	A	8473	1	608	
7856	15907	A	8474	1	593	AKYICENQDSISSKLKECCEKPLEKSHC IAEVENDEMPADLPSLAADFVESKDVCK NYAEAKDVFLGMFLYEYARRHPDYSVV LLLRLAKTYETTLEKCCAAADPHECYAK VFDEFKPLVEEPQNLIKQNCLEFEQLGEY KFQNALLVRYTKKVPQVSTPTLVEVSRN LGKVGSKCCKHPEAKRMPCAEDYLSRG PRTSRMFAKTMLRQRMSSWAC/CLYEY ARRHPDYSVVLRLAKTYETTLEKCCA AADPHECYAKVFDEFKPLVEEPQNLIKQ NCLEFEQLGEYKFQNALLVRYTKKVPQ VSTPTLVEVSRNLGKVGSKCCKHPEAKR MPCAEDYLSRG

7857	15908	A	8475	1	1428	MKWVTFISLLFLFSSAYS SRGVFRRDAHK SEVAHRFKDLGEENFKALVLIAFAQYLQ QCPFEDHVKL VNEVTEFAKTCVADESAE NCDKSLHTLFGDKLCTVATLRETYGEM ADCCAKQEPERNECF LQH KDDNP NLPRL VRPEVDVMCTAFHDNEETFLKKYLYEIA RRHPYFYAPELLFFAKRYKAAFTECCQA ADKAACL L PKLDEL RDEG KASSAKQRL KCASLQKFGERAFKAWAVARLSQRFPK AEFAEVSKLVTDLT KVHTECCHGDLLEC ADDRADLAKYICENQDSISSKLKECCEK PLLEKSHCIAE/HRNLGKVGSKCKHPEA KRMPCAEDYLSVVLNQLCVLHEKTPVS DRVTKCCTESLVNRRPCFSALEVDETYV PKEFNAETFTFHADICTLSEKERQIKKQT ALVELVKHKPKATKEQLKAVMDDFAAF VEKCCKADDKETCFAEEGKKLVAASQA ALGL
7858	15909	A	8476	1	748	
7859	15910	A	8477	1	1515	
7860	15911	A	8478	1	2931	MKWVTFISLLFLFSSAYS SRGVFRRTP LGP ASSLPQSFL LKCLEQVRKI QGDGAALQE KLCATYK LCHPEELVLLGHSLGIPWAPL SSCPSQALQLAGCLS QLHSGFLYQGLL QALEGISPELGPTLDTLQLDVADFATTIW QQMEELGMAPALQPTQGAMPAFASAFQ RRAGGV LVASHLQSFLEVSYRVLRLHLA QPGGGGDAHKSEVAHRFKDLGEENFKA LVLIAFAQYLQCPFEDHVKL VNEVTEF AKTC
7861	15912	B	8479	1	6124	MKWVTFISLLFLFSSAYS SRGVFRRDAHK SEVAHRFKDLGEENFKALVLIAFAQYLQ QCPFEDHVKL VNEVTEFAKTCVADESAE NCDKSLHTLFGDKLCTVATLRETYGEM ADCCAKQEPGRNECF LQH KDDNP NLPRL LVRPEVDVMCTAFHDNEETFLKKYLYEI ARRHPYFYAPELLFFAKRYKAAFTECCQ AADKAACL L PKLDEL RDEG KASSAKQR LKCASLQKFGERAFKAWAVARLSQRFP KAFAEV
7862	15913	A	848	24	474	
7863	15914	A	8480	241	348	
7864	15915	A	8481	2	191	
7865	15916	A	8482	3	370	
7866	15917	A	8483	1	351	
7867	15918	A	8484	44	454	
7868	15919	A	8485	200	408	
7869	15920	A	8486	1	110	
7870	15921	A	8487	48	462	
7871	15922	A	8488	1	721	MHWGVGFASSRPCVVDLSWNQSI SFFG WWAGSEEPFSFYGDIIAFPLQDYGGIMA GLGSDPWWKKTL YLTGGALLAAAYLL HELLVIRKQQEIDSKDAILHQFARPNNG VPSLSPFCLKMETYL RMADLPYQNYFGG KLSAQGKMPWIEYNHEK VSGTEFIIDFLE EKLGVNLNKNLGPHERAISRAVTKMVEE HFYAALSWRWYHPVPTCPLQKFLQFVRQ LMLFMRTSPSALPGH
7872	15923	A	8489	3	785	
7873	15924	A	849	24	415	
7874	15925	A	8490	5	302	
7875	15926	A	8491	1	2086	
7876	15927	A	8492	3	2011	
7877	15928	A	8493	305	505	

7878	15929	A	8494	3	1588	EEEDYDVYKSEFTEADLEDFTEAAVDE DDEDEEEGEEVVEDRDYYYDTFKGDDY NEENPTEPGSDGTMSDKEITHDVKAVCS QEAMTGPCRAVMPRWYFDLSKGKCVRF IYGGCGGNRNNFESEDYCMVCKAMIP PTPLPTNDVDVYFETSADDNEHARFQKA KEQLEIRHRNRMDRVKKEWEEAELQAK NLPKAERQTLIQHFQAMVKALEKEAASE KQQLVETHLARVEAMLNDRRRMALEN YLAALQSDPPRPHRILQALRRYVRAENK DRLHTIRHYQHVLAVDPEKAAQMK\SQ VMTHLHVIEERRNQSLSLLYKVPYVAIQ EIQEEIDELLQEQRADMDQFTASISFV DVRVSSDESEEIPFHPFHPFHPALPENEG SGVGEQDGLIGAEKVINSKNKVDEK HGPLNETLDVKEMIFNAERVGGLVEERE SVGPLREDFSLSSSALIGLLVIAVAIATV IVISLVMRLKRQYGTSHGIVE/VVDPML TPEERHLNKMQRHGYENPTYKYLEQM I
7879	15930	B	8495	73	1845	MAATGTAAAAATGRLLLLLVGLTAPA LALAGYIEALAANAGTGFAVAEPQIAMF CGKLNMHVNIQTGKWEPTGTGKSCFET KEEVLQYCEMYPELQITNVMEANQRV SIDNWCRRDKKQCKSRFVTPFKCLVGEF VSDVLLVPEKCQFFHKERMEVCENHQH WHTVVKEACLQGMTLYSYGMLLPCG VDQFHGTEYVCCPQTKIIGSVSKEEEED EEEEEEDEEEDYDVYKSEFTEADLEDF TEAAVDEDEDEEEGEEVVEDRDYYYD TFKGDDYNEENPTEPGSDGTMSDKEITH DVKAVCSQEAMTGPCRAVMPRWYFDL SKGKCVRFIYGGCGGNRNNFESEDYCM AVCKAMIPPTPLPTNDVDVYFETSADDN EHARFQKAKEQLEIRHRNRMDRVKKEW EEAELQAKNLPKAERQTLIQHFQAMVK ALEKEAASEKQQLVETHLARVEAMLND RRRMALENYLAALQSDPPRPHRILQALR RYVRAENKDRLHTIRHYQHVLAVDPEK AAQMKSQVMTHLHVIEERRNQSLSLLYK VPYVAQEIQEEIDELLQEQRADMDQFTA SISEHPCGRPGEL*
7880	15931	B	8496	55	274	MADANKAEVPGATGGDSPHLQPAEPPG EPRREHPAEAEKQQPQHSSSSNGVKME NDESAKEEKSDLKEKSTGX*
7881	15932	A	8497	3	754	FLFFEPHPAEARKQQPQHSSSSNGVKME NDESAKEEKSDLKEKSTGSKKANRFHPY SKDKNSGTGEKKGPNRNRVFISNIPYDM KWQAIKDLMKREKVGVTYVELFKDAEG KSRGCGVVEFKDEEFVKKALETMNKYD LSGRRVNIKEDPDGENARRALQRTGTSF QGSHASDVGSGLVNLPPSILNPNIPPEVI SNLQAGRLGSTIFVANLDFKVGWKKLKE VFSIAGTVKAGRYKEDKDGQSRGMGT
7882	15933	A	8498	2	346	
7883	15934	A	8499	1	414	AWHEETHKVDLGLPEKKKNKKVVKEPE TRYSVLNDDYFADVSPLRATSPKSV HGQAPEMPLVKKKKKKKKVSAALGKE VKRSQSKLRLRNTSP*VMTLRPPQRKR*S PKRR*SSQSSRSQL*KGRKRRRGKRGG
7884	15935	A	85	2	526	RGGCDRDGPFSASSPLAMASLTVKAYLL GKEDAVAREIRRFSLCCSTEPEAAQEVAA GPGPCERLLIRVAALFPAVRPGGFQAHY RDEDGDLVAFSSDEELTMAMSIVKDDIF RIYIKETNECLANDHRPPDAHERA/PRNM VHLNEICDG*NGPVAGTLYMCSFCPYYY LCTPFNV

7885	15936	A	850	24	432	APSPDAMG/HSLWGKVNVEDAGGETLG RLLVVYPWTQRFFDSFGNLSASAIMGN PKVKAHGKKVLTSLGDAIKHLDDLKGT AQLSELHCDKLHVDPENFKLLGNVHFG KEFTPEVQASWQKMVTGVASALSSRYH
7886	15937	A	8500	1	1977	MEVDFKIRKVGQWTITLQEHVSVLLFIE ETHPENKPTSTAVEESHISRDVVMVNFQ COLDWSKGYLEAYLTKINSICSHRFLD GSVTCHDETGSSRDARDTVGTGVRVND ESVEQLGLRRTMWLGICRGAAAMAAVST VTAFAGRPRGRSRNPRGWAGDSK WTS GSRRSWLSRGGGEISPTGMITKTHFVYL GLPEK KKKKRVVKEPETRYSVLNDDY FADVSLRATSPS*DV AHGQAPEMPLVK K K K K K K KGVSTLCEEHVEPETTLPARRT EKSPSLRKQVFGHLEFLARGKRKNKKSPL AMSHASGVKTSQDPRQGEETRVGKK\ SKKHKKEKKGPGPHSLPVQDPWFCEA REARDVGDTCSVGKKDEEQAALGQKRK RKSPREHNGKVKKKKKIHQEGDALPGH SKPSRSMESSPRKSGKKKPVKVEAPEYIP ISDDPKASAKKKMKSKKKVEQPVEEPA LKRKKKKKRKESGVAGDPWKEVVPSE MDFAVGELRETDTDLEVVLKKGNMDE AHIDQVRRKALQEEIDRESGKTEASETR KWTGTQFGQWDTAGFENEDQKLKFLRL MGGFKNLSPSFSRPASTIARPNMALGKK AADSLQNLQRDYDRAMSWKYSRGAG LGFSTAPNKIFYIDRNASKSVKLED
7887	15938	A	8501	2	376	TAGFLLPQGLPCKYHLMYGSHLMPNVW RRTTTREP KPLGDAEPNTRSLMWEVKRS SSGPWVFKSNIACHIPIFRITSTSSAYD/W PFTHSF**FSGIIPCPHGCHQPFSDQDMVT FPLCQLPAHLH
7888	15939	A	8502	2	956	
7889	15940	A	851	323	737	
7890	15941	A	852	24	589	
7891	15942	A	853	100	684	
7892	15943	A	854	135	851	APSPDAMGHFTEEDKATITSLWCKVNV EDAGGETLGRLLVVYPWTQRFFDSFGNL SSASAIMGNPKVKA YGKKVLTSLGDAI KHLDDLKGTFAQA*SELHCDKLHVD ENFKLLGKCAGDPFLAIPFSAKEFTPGG CRLPGQKDG*LGVGQCPGPPDTTEAQLP MNAELFKDMALFLQAITNNKSISAKRSN FKLLGNVLVTVLAIHFGKEFTPEVQASW QKMVTGVASALSSRYH
7893	15944	A	855	40	505	QPQTVSILHLTPEEKSAVTALWGKVNLD EVDVEALGRLLVVYPWTQRLLSFGNL STPDVAVMGNPKVKAHGKKVLGAFSDG LAHLNKLKGTATLSELHCDKLHVDPEN FRLLGQRAW SV/LAGPITFGKEFTPPVAG LPIRKL VAGVANALAHK
7894	15945	A	856	41	536	APSPRRPWGHFTEEDKATITSLWGKVN VEDAGGETLGRLLVVYPWTQRFFDSF GNLSSASAIMGNPKVKAHGKKVLTSL GDAITKHLDDLKGTFAQA*SELHCDKL HVDPENFKLLGNVLVTVLAIIPFSAKEF TPEGCRASWAERWVTWSWPVPCSSRYH
7895	15946	A	857	241	435	
7896	15947	A	858	243	449	
7897	15948	C	859	275	397	MLCWLKLG VHHYSGNNIELGTAMRENT YRVLHTGLFIDPG*
7898	15949	A	86	285	326	NLPKILGHTQKRLQSTRSWKRMMLSLIN LQIIYNPVIPFVGITPDHLDVFS*IVIRGP VSSDANYIQYDL*NPKNLSLV
7899	15950	A	860	2	424	

7900	15951	A	861	73	608	SVMTPVAPTLKAASKSDSSGPHRLREN PWCLSPADKTNVKAAWGKVGHAHAGEY GAEAL\ERMFLSFPTTKTYFPHFDLSHGVS AQV*GATGK\KVADAL\TNAVAHVGR LPNALSGPEATLHAHKLRGGPGSTFKLL \SHLPCLGEPWAAHLPGRVSPPLGGCKAS LGTNFLGFLLKQPC
7901	15952	A	862	7	330	
7902	15953	A	863	2	379	
7903	15954	A	864	3	722	HERGSVSCFN SGWTDHIRGHFLQPPTAL RFPLRLQPPGPSSRPSASGTCQHQLWL APSCQPTMSSQIRQNYSTDVEAAVNSLV NLYLQASYTYLSLGFYFDRDDVALEGVS HFFRELAEEKREGYERLLARMQTQRGGR ALFQDIKKPAEDEWGKTPDAMKAAMAL EKKLNQALLDLHALGSARTDPHLCDFLE THFLDEEVKLIKMGDHLTNLHRLGGPE AGLGEYLFERLTLKHD
7904	15955	A	865	40	264	
7905	15956	A	866	3	1231	
7906	15957	A	867	3	496	
7907	15958	A	868	1121	1442	
7908	15959	A	869	2380	2714	EETEGQARWLTPVIPTLWEAEAGGSPEV GSSRPA*PPLSAFLYPAFFLRSARFL
7909	15960	A	87	133	392	LITIYYIPENCQPGQHSETSSL/LKKIKKLA GCGGTHL*SQLLGRLRREDYLSPPGQICS EP*SYHCTPAWVTGQDPASKKKKKKKK R
7910	15961	A	870	3260	3533	
7911	15962	A	871	6330	6802	RSKGRAKISRRAGQVQWLMPVIPALW EAKAGGSPEARSL*PAWPIW*NPALHSSL /V**SKALSQKQKKQKNGHDGQHDET V SLLKIQKSAGAHL*SQLLREAEAGELLE P RRQTLQ*AEILPLHSGLDKSKTPSQKKK KKRSQGQVGVREPQGP
7912	15963	A	872	1	500	
7913	15964	A	873	63	375	
7914	15965	A	874	27	374	
7915	15966	A	875	1	801	
7916	15967	A	876	1286	1388	
7917	15968	A	877	1	1056	
7918	15969	A	878	651	1467	
7919	15970	A	879	3	414	
7920	15971	A	88	2	359	EVLRMAGTGLVAVEVVVDALPDFEEGY EGPGGREAAAALVEDETRRYRPTMNYL SYLTSPDYSAFETDILNNDSERLAARQP I*LLTMKLYLSSPSCGHYFVLLHVYNC LSLYFPSP
7921	15972	A	880	164	412	
7922	15973	A	881	29	489	
7923	15974	A	882	44	847	IKENSFIWIRASTITYLKGETIGTEPEGK G EGECASTGLVNPFRDFPSKVSFPKIPV*T SLHITPLAIVCPFQNTWSLHGKGQRGK G QNINKRETKNKNTTLFREPKQNPQIPFF* TTQGH\EVKSLSTSVPL*ITGRKA\STQSL* QEFSTLEAHEAEDG/ALLRVPLPSWRA PSGVGTVKSRFSH/VPRDHQPTTHWWP WWSMAGRQRPSPTLSHFLSWMTSCLGP SHFRRELAFWKPTFPIHHRTRQSAHILVP LVFKGHFQOTL
7924	15975	A	883	40	431	
7925	15976	A	884	122	341	
7926	15977	A	885	23	419	

7927	15978	A	886	1	598	LARNPGSTHASGGILLGRQCWVLFMAP KKAKKRAGGANSNVFSMFEQTQIQEFK EFTIMDQNRDGFIDKNDLRDTFACPW RKLNVKNEEIDEMKEAPGINFTVFLT MFWGRNLKGADPEGKPFNLNRISKVFDPE GKGVAEGLDYVREMLNNAARRRGFPKE VDQMFAAFPDPVTGNLDYKNLVHIITH GEEKD
7928	15979	A	887	174	452	
7929	15980	C	888	60	245	
7930	15981	A	889	1878	2295	SFSPAWPSPRWCASSSWCTDCLVPSTCAA LQHPVVFLDKGNHFLIFFYFFFFVILYTSS SHEVED*PCVMFSKIKWYLLE/VRYLVV AYRLSFCKERKKTIKLCQIILLCLAARTW LPCLSLSLPPFLSFLCMDFFEKK
7931	15982	A	89	69	342	VGNMSGTNLDGNDEFDEQLRMLELYGD GKDGDTLTDAGGEPDSLQYSTDTPTPE WDLDI*AWFFMISEYFLFTYLQVQMAFL LYCGFMFL
7932	15983	A	890	3218	3469	
7933	15984	A	891	618	1236	
7934	15985	A	892	12	138	
7935	15986	A	893	1	1002	
7936	15987	A	894	66	293	RLLFRRFCPTGCSLDVVLISFS*GCGFL*S LHTGFMPSPFVWPGDSLQIVTNFSWR FSSAVAFSSASGSFPQGS
7937	15988	A	895	2202	2335	
7938	15989	A	896	343	906	
7939	15990	A	897	1455	1604	
7940	15991	A	898	370	807	
7941	15992	A	899	1	1548	
7942	15993	A	9	1130	1377	ASHLRSGVRDQPEQHGETPTLALKIQKSP GCGGRHL*SQLPGRRLQENHLNLGGGG CGELRSHHCIPAWVTETLTKKKKKKRR
7943	15994	A	90	144	2205	DRRERCHPFKRALMP/LRPAEPRPAFPIH HPLLQDANEAPG/CWAEAVQGCPT/AE DPPCVSRAAPGGSVPPFC/PGRL*GWGG PRGKGDPEGLADSGPPCELFEESRPPR VVGESPAEKLAYPPAGPLCFF*PFSEF/PE L*TKSPS*EMTNHMLHSGGGGSWPGSPT SPGPPPGGSLPRAAALPPKTPGQTRAPAG AGCPHADLAMSPGPTPGSPPVAPTSLVA DCSSQNV*HPRVPEPTQAATPVQFPKNVI TSPGCQSPPKQP/APVPVPRMYN/MPRVT EPAQAATPESLGHVPELRSTQTVATASP GHLTPMKGTLGSAREIPEVGTGPPWCPV PPPSPLPLCPAPRGSAAGLTPLRASQTS GSTFLLISFPFCKLTSPFGLGVQGTAPAGG RSVCTVVQGVVSEGGTSVGQLLHLPVP LCPLSKGQVMAPIAGL/PIQCSGPPVQW GDPRPTPP*CIQPGQVYCCD/VLPALLCR FPGAAQPRTPHEWACPALAECLPCALRQ VPRAGQPG*TMCGAGTGPCWKGGQK EAGGRCEKLPPLNTTALPAPAGPCSQ PLSHGWPGLPSPH*DSRQGGPDP/ASPS QPWLKPPNPTMGLRKPRK*LLPASPKR LRKPKAASLPVRHPKASLGCS*EGLIWA LP*GWPCRWGPLGALGGTWQPPRHPGP VLISRA*GLQPQPLTK
7944	15995	A	900	3	127	VLCQFSKGMLPVFAQSV*YWLWVRYVP SIPSLLRVFSMKGC

7945	15996	B	901	1	1926	MFSDSLTPMHKERVTLKREGHVVGFM GDGINDAPALRAADIGISVDGAVDIARE AADIILLEKSLMVLEEGVIEGRRTFANML KYIKMTASSNFGNVFSVLVASAFLPFLP MLPLHLLIQNLLYDVSQVAIPFDNVDD QIQKPQRWNPADLGRFMIFFGPISSIFDL TFCLMWWWVFHANTPETQTLFQSGWVW GLLSQTLIVHMIRTRRVPIQSCASWPLM IMTVIVMIVGIALPFSPLASYLQALPLS YFPWLVAIAGLATNSDRFDLNLHVFRQ TGNFNARTCREGGVVFGEFGFASGFDDR FYVIQRLTCLCSDVCRYFARFRIYRDLTG GDDHIAQINXLYVRPIAAGPAPGTFRWL HSRRAMLLTRADMEDRERFLNARDTLR ALLDNNIVPVINENDAVATAEIKVGDND NLSALAAILAGADKLLLLTDQKGLYTAD PRSNPQAEIKDVYGIDDALRAIAGDSVS GLGTGGMSTKLQAADVACRAGIDTIIAA GSKPGVIGDVMEGISVGTLFHAQATPLE NRKRWIFGAPPAGEITVDEGATAAILERG SSLLPKGIKSVTGNFSRGEVIRICNLEGRD IAHGVSRYNSDALRRIAGHHSQEIDAILG YEYGPVAVTVMHDIR*
7946	15997	A	902	1	1602	
7947	15998	A	903	1	972	
7948	15999	A	904	280	358	
7949	16000	A	905	141	152	QCPPQPRPPGRCPTQSGHTGCSTGG*GL NPLYYNLCDRSGAWGIVLEAVAGAGIVT TFVLTHILVASLPFVQDTKKRSLGTQLR GRCHHTAGTMGSC
7950	16001	A	906	177	247	
7951	16002	A	907	574	737	
7952	16003	A	908	221	576	GVGGDTHDTHPNTGREGGPSRSGAHVA GPARGRRSLESPLPGARSSGSPNPTASP SPPLTQSHT*GFPKRPESSCRLSRGVAAW WLWAEYIVFKPAGSSWHCPSPWLLAVA RGRMMS
7953	16004	A	909	1	157	TKTWTLKKHFVGYPTNSDFELKTAELPP LKN/GRVAAKRLKEGDTMMGQQVAK
7954	16005	A	91	122	874	SPLLGGLRQKIFFNWEGGSIKPKLTSP PARQGQGGPFSSSSPSSSSPES*LFPALRT PSRQGGSAIPASGLSTPACVPSGSTRNL FHAPHVGRVSLLLPAS*KAAGPSKKGPG QVNP*FRKPGVGI*RSVGPRQPLE*LH ARKNRAGPVPLPGLGKEGSLQGPRTQ LASLLMEGPPTHPTIHDGTTAQPELWPC RGPQMOSWGSQPEHTFGPRQPHPPHPS RHRSDSESSLLQASAHGPKA
7955	16006	A	910	3	484	VRLREDDRRGPSLGTCHKSDPGRPAQS QPPSPGSGTFGLLSFRMVRTKTWTLKKH FVGYPTNSDFELKTAELPPLKNGEVLE ALFLTVDPYMRVVESKNVALPKGTIVLA SPGWTTTHSISDGKDLEKLLTEWPDITPLS LALATVGMPLATAYFGLLE
7956	16007	A	911	1	1147	MLLCQKAPSLKTTYNHPPAADSAGTAL NLETTVKQTRTQLEYNNVGTDLSPPEK SFNYPLLSSSGDQFEIQLNQQLWSLIPNN DVRRLVSHVIRLTCTETHLQLACAK LISRTGLLMKLLSEQQELRTVSMTAWKP RMNRKSRMRQSHFASHAGRWWHNNH STLQPQSPKLQMAELSEARRRSFRMVRT KTWTLKKHFVGYPTNSDFELKTAELPPL KNGGLEFLIAYGMLYFVEVLLEALFTV DPYMRVAAKRLKEGDTMMGQQVAKV VESKNVALPKGTIVLASPGWTTTHSISDG KDLEKLLTEWPDITPLSLALGTVGMPLG TAYFGLLEICGVKGGETVMVNAAGAV GSVVGQIAKLKGCKVVGAVGSDEK

7957	16008	A	912	214	540	
7958	16009	A	913	495	684	
7959	16010	A	914	1	1911	
7960	16011	A	915	3	1381	KTPFVGYQHQRPKVDKTTKMGRNQSRK AENSKNQSTSSPPKDRSSLPATEQSWTE NDFDELTEVGFRSAITNFSELKEHVLTR RKEAKNLEKRLDEWLTRINSVEKTLNDL MELKTMAQELRDARTSFNS*FNQVEKRI SVIEDQIDEIKQDDKAAETCNWRWVSES LRQLRASVDAFHARASHYNAGECLHQL AALNSRLNCAQEMARRDSIGEVPPVPW RTVVGSGIAGEAKLDHLRLVSLIGREVN KENSPAATRWFQAGALAGGQIVLQA AKPNAHGQPVVATRNLNPAGIVAVLK QRPRLVAAAQAFYLRDPIDLRACRVFK TFLPETRIMTSYYAIEWSLWTLVDVLHA ENSESAHMSHNSYDPPSDVARHLTHLPM SPIPDYIARFRYRHRVRVLTARKLSPAF MRCSEIQRYSIMLERGFNGGYCRSTTV RVVTEATRMLSF
7961	16012	A	916	1	1191	
7962	16013	A	917	1	227	
7963	16014	A	918	1	392	
7964	16015	A	919	157	388	
7965	16016	A	92	27	319	IINTSISLWFLGLSSIIHHYQERFL*FN*FG SYMVFIEIFFGISSAFFVC*WPK/Y/LLYFR YCRCFLILLLLSIFEF/DLCYLVL*IFMFFL FFYMFLCV
7966	16017	A	920	451	593	
7967	16018	A	921	467	1038	
7968	16019	A	922	233	345	
7969	16020	A	923	1	1386	
7970	16021	A	924	1	1254	
7971	16022	A	925	36	695	
7972	16023	B	926	52	554	MGKEKTHINIVVIGHVDSGKSTTTGHLIY KCGGIDKRTIEKFEKEAAEMGKGSFYA WVLDKKAERERGITIDISLWKFETSKY YVTIIDAPGHRDFIKNMIILNHPGQISAGY APVLDCHTAHIACKFAELKEKIDRRSGK KLEDGPKFLKSGDAAIVDMVPGKPI*
7973	16024	A	927	63	1545	PLKAKMGKEKTHINIVVIGHVDITGKST TTGHLIYKCGGIDKRTIEKFEKEAAEM GKGSFYA*VLDKKAERERGITIDISL WKFETSKYYVD*SLIAPGHRDFYSKT* FTGTISRLDLVWGAPFLGG/CLP*LFAAG VWWNLKAGISQEWGRTREHALLGLHTG VWKQTKLFGVNKNWIST*GHPTAQKKIL KEIVKGKSALTIRKIGYNPDTSSILCPISG WNGDNMLEPSANMPWFQGDGKVTRK DGNASGTTLEALDCILPPTPTDKPLGL PLQDVYKIGGIGTVPVGRVETGVLKPGM VVTFGPVNVTTEVKSVEMHHEALGEAL PGDNVGFNVKNVSVKDVRRGNVAGDS KNDDPMEAAGFPAQVILNHPGQISAGY APVLDCHTAHIACKFAELKEKIDRRSGK KLEDGPKFLKSGDAAIVDMVPGKPMCV ESFSDYPPLGCAVRDMRQTVAVGVKA VDKKAAGAGKVTKSAQKAQKAK
7974	16025	A	928	2	246	
7975	16026	A	929	318	420	
7976	16027	A	93	264	664	IRLAFCGIFFOAFSICNSNIWLLPEIPLLG IYP*E*NTKTCTQMFTAALFIIS*KVEISQ MPIINEKINKLWYIHMTCHTKNKVLIRDT T*MNLENIKLNERRGQTKKKKAIYCLSL FM*YVQNRQIHTDEK
7977	16028	A	930	205	400	

7978	16029	A	931	234	425	ICKWIIIPCGLAGSYKIAKWVSGFTLLLT HMGAAWV*LSLFGYTILF*FPKMSSFL TMKKDIF
7979	16030	A	932	405	862	
7980	16031	A	933	2	412	
7981	16032	A	934	110	431	
7982	16033	B	935	754	1544	MREIVHIQAGQCGNQIGAKFWEPWKASS IELSQCRNSPSKVFRSKEHDGLPVTPTTR R*
7983	16034	A	936	1	451	
7984	16035	A	937	1	258	
7985	16036	A	938	3	1906	
7986	16037	A	939	1	585	ECLCVSTAVRIRHELKTMTELLRGGSF FKDMRVPSALVTLHMLLCSIPLSGRDLS DEQKIQNDIIDILLTFTQGVNEKLTISET LANNTWSLMLKEVLSSILKVPEGFFSGLI LLSELLPLPLPMQTTQVSLPYNMHLINDC SNTF*KASDSVKKQKPSSPFLPKRHKITG *GGDKTETSWSLRKYGGKNFK
7987	16038	A	94	2	605	SHGTPGRPTRPVEFFSGGSAGSFSPWFPK KAKKRAGGADSNVFSMFEQTQMQUEFK EAFSIMDQNRDGFIDKNNDLRDTFAALGE VNVKNNEIDEMIKEA/PGLNFTVFLTN VWGENLREADPEETILNAFKIVFDP*RP KGCMA\DYVSGKMLTHAGRRRFSKEA EVDQMFAGLPPLT*LGNLDYKNLIVHIIT HGEEKD
7988	16039	A	940	625	2115	
7989	16040	A	941	180	359	GSLQRDRWPTSSWRTGRQGSSLLRPRWI SFLAQLWRV*RIPAGTFVIRIEDGNRRRA FI
7990	16041	A	942	1286	2188	
7991	16042	A	943	1	2537	
7992	16043	A	944	2	437	
7993	16044	A	945	298	581	GARAEARAGSGQGAGLVSSPVRWRG WSDKGAERPGLPLSPLREVSRAGPSG/H AARGQQPGRPRFPPPGPRPRRRRCPCTRA RPGGAAGGGPCL
7994	16045	A	946	377	639	
7995	16046	A	947	1279	2253	
7996	16047	A	948	268	369	
7997	16048	A	949	15	440	
7998	16049	A	95	1	1254	
7999	16050	A	950	118	375	VAVVQIIFLPVFIAEKYKDLVPDNSKTAD NATKNAEPLINLDVNNPDFKAGVMALA NLLQIQRHDDYLVMLK\AIRILVQERLTQ D
8000	16051	A	951	1	969	AATVLTIGEAPSFRSDSAPARPLAASP PAPPAPPRFFSPGRGPGDQSEKRWTFR RKLTSLDYHNPAGFNCKDETEFRNFIV WLEDQKIRHYKIEDRGNLRNIHSSDWP FFEKYFKRC*TCPFKIQDRQESYLTGFFG LAVRLEYGDNAEKYKDLVPDNSKTA*Q LQKIAEPLINLDVNNPDFKAGVVGFG* TWLQIQRHDLPGQMLKANSQFWVQE RLDHQGCQFA*GQIKQKRGPLVALDKHI LGFDTGDAVLNEAAQILRLHIEELRELQ TKINEAIVAVQAIADPKTDHRLGKSLED EHLRTSASHLL
8001	16052	A	952	1258	1429	
8002	16053	A	953	189	403	

8003	16054	A	954	51	1702	GLPRCASVQPVCEYQRRWKRWLWDIT WEKWKQMDTVQKSIYRNILAEKYRNVL LDGKLAAGAKTSRVEQQDISKED*SQRL EMEELAKRKSVPEEIWKS RGQFKNQQLN KENNLGQEIATCTKIPTKRKDIESNEF/RE KFYCKINTCC/MNR*ILWKRIVINM MVHVE RCSNKTQI*LYKESMMEKKKPKYSECG RTFRGHITLVQH QITHCGERPCKCTE CRK GFNQSSHLRNNQRKTLSGEKP YKCSECG KAFSYCLVLNQHQRIHSGEKP YEGTECG KTFIQS\SYLTQHQR/TSHTGEKPYTCLEC GRLFSQNTHTLTHQRIHTGEKPYECNEC GRSFSQTAHLTQHQRMYTGEKLYECNE CEKAFHDHSALIQHHIVHTAEKPYDIMIT GKTFSYCSDLIQHORMHTGEKPYKNEC GNAFSDCSSLIQHQRTHTGEEPYECKQC GKAFSRSTYLTQHQRSHAGEKQYKNE CEKTFSLSSFLTQHMRVQTGEKPYKYNE YGKAFSDCSGHFQRTHTGEKPCECND GKPFSCSALIQH KRIHTRKKP
8004	16055	A	955	2	270	REEKEWPPHTQPWYPEGCFKDGQHYEE GSVIKENCNS*WTAQNY SQFWGMTLED GFKFRLGTLPPSPMLLSMNEMTVSVPSD SRMCMYL
8005	16056	A	956	1	999	
8006	16057	A	957	1	1518	VHCSEFPGRPPRPRTRGRKVEAIPVFOR MWTGYKILIFS YLTTEIWMEKQYLSQRE VDLEAYFTRNHTFLQGTHFKRAIFQIGQ YCRNFGCCEDRDDGCVTEFYAANALCY CDKFC DRENSDCCPDYKSFCREEKEWPP HTQPWYPEGCFKDGQHYEEGSVIKENC NSCTCSGQQWKCSQH VCLVRPELIEQV NKG DYGWTAQNY SQFWGMTLEDGFKF RLGTLPPSLMLLSMNEMTASLPATTDLP EFFVAS YKWPGWTHGPLDQKNCAASW AFSTASVAADRIAISKG RYTANLSPQNL ISCCA KNRHGCNSGSDRAWWYLRKRG LVSHACYPLFKDQ NATNNGCAMASRSD GRGKRHATKPCPN NVEKSNRIYQCSPPY RVSSNETEIMKEIMQNGPVQAIMQVHED FFHYKTGIYRHVTSTNKESEKYRKLQTH AVKLTGWGTLRGAQGQKEKFWIAANS WGKSWGNGYFRILRGVNESDIEKLIIAA WGQLTSSDEP
8007	16058	A	958	316	411	
8008	16059	A	959	314	390	
8009	16060	B	96	52	554	MGKEKTHINIVIGHVDSGKSTTTGHLIY KCGGIDKRTIEKFEKEAAEMGKGSFKYA WVLDK LKAERERGITIDISLWKFETSKY YVTIUDAPGHRDFIKNMILNHPGQISAGY APVLDCHTAHIACKFAELKEKIDRRSGK KLEDGPKFLKSGDAAIVDMVPGKPI*
8010	16061	A	960	112	1154	SCGLGHRKTFSFVSLPARNETQPKACRE QNMEGDFSVC RNC*RHVV SANFTLHEA YCLRFLVLCPECEEPVPKETMEEHCKLE HQQVVGCTMCQ QIMHKSSLEFHKANECQ ERPVECKFCKLDMQLSKLEHESYCGSR TELCQCGGQFIMHRMLAQRRDVC RSEQ AQLGKGERISAPEREIYCHYCNQMIPEN KYFHHMGKCCPDSEFKKHFPVGNPEILP SSLPSQAAENQTSTMEKDV RPKTR SINRF PLHSESSSKAPRSKNKTLDP LLMSEPKP RTSSPRGDKAA YDILRRCSQC GILLPLPIL NQHQEKCRWLASSKRKTSEKFQLDLEK ERY YKFKRFHF
8011	16062	A	961	103	538	
8012	16063	A	962	1	405	
8013	16064	C	963	334	471	

8014	16065	A	964	1	1137	
8015	16066	A	965	1	451	GDRPFRV*DPRAGQAATFWTDPSSL*SL LLGVMFPAAPSPRTPGTGPRRGPLAGLG PGSTPRTASRMGLPLGSAVSSPVLFSPGG RRSSLISRGTPTRMLPHHSITESVNYDAK TIGSSLPVKVMEALTLAEVDDQLTNINE GGWACL
8016	16067	A	966	301	1867	
8017	16068	A	967	57	383	GWLAHTANERPVRFCFPWLEGFLENIRA PTLNF*QIQQLAIFVEPIKTILLPFCFFRIF STRVRICTYSSHSFPGAGLLHFCSSSL VRFKISFGDTVAVAPVPDF
8018	16069	A	968	507	904	GKRAGECWRRSLRPRGPRGETRAASPSS ARPSLALASAPRPKSGPRRQGPRLW PRGLKGQVCARGPGRGGPGGVGRRSA SARAPRVPGDQPPPPAPSS*ED/WT*EIG RLSSHAPLAVLHTRSALLNS
8019	16070	A	969	379	858	
8020	16071	A	97	1	1299	
8021	16072	A	970	259	483	
8022	16073	A	971	175	588	
8023	16074	A	972	1	383	
8024	16075	A	973	79	445	
8025	16076	A	974	1163	1401	
8026	16077	A	975	80	406	
8027	16078	C	976	70	240	MITGTSQADCAVLIVAAGVGEFXAGISK NGQTRRDMRKXLRKSALT LRKLATTPT Q*
8028	16079	B	977	68	490	MGKEKTHINIVVIGHVDSGKSTTTGHLIY KCGGIDKRTIEKFEKEAAEMGKGSFKYA WVLDKLKAERERGITIDISLWKFETSKY YVTIIDAPGHRDFIKNMITGTSQADCAVL IVAAGVGEFEAGISKNGQTREHALLA*
8029	16080	A	978	261	406	
8030	16081	A	979	1	678	
8031	16082	A	98	36	697	KLPLKAKMGKEKTHINIVVIGHVDSGKS TTTGHLIYKCGGIDKRTIEKFEKEAAEMG KGSFKYAWVLDKLKAERERGITIDISLW KFETSKYYVTIIDAPGHRDFIKNMITGTS\ QADCAVLIVAAGVGEFEAGISKNGQTRE HALLAYTLGVKQLIVGVNKM DSTGAIL TGDFPSLEPRHVSTWLQHVVTIPTRNWH KCYCVGVVANFLNVSADFLNNF
8032	16083	A	980	181	340	
8033	16084	A	981	1	375	

8034	16085	A	982	1	2583	MVNFTVDQIRAIMDKKANIRNMSVIAHV DHGKSTLTDLSVCKAGIIASARAGETRFT DTRKDEQERCIPKVNAILFYELASEND LNFIQQSKDGAGFLINLIDSPGHVDFSSA VTAALRVMTGALVVVDCVSGVCVQTET VLRQAIARIKPVLMMNKMDRALLELQ LEPEELYQTFQRIVENVNVIISTYGEESG PMGNIMIDPVLGTVFGSGLHGWAFTLK QFAEMYVAKFAAKGEGQLGAERAKK VEDMMKKLWGDYFDPANGKFSKPAT SPEGKKLPRTFCQLILDPIFKVFDAMNF KKEETAKLIEKLDIKLDEKDKKEGKPLL KAVMRRWLPAGDALLQMITIHLPSVTA QKYRCELLYEGPPDDEAAMGIKSCDPKG PLMMYISKMVPTSDKGRFYAFGRVFSGL VSTGLKVRIMGPNYTPGKKEDLYLKPIQ RTILMMGRYVEPIEDVPCGNIVGLVGVD QFLVKTGTTTTFEHAHNMRVMKFSVSPV VRVAVEAKNPADLPKLVEGLKRLAKSD PMVQCHIEESGEHIIAGAGELHLEICKDL EEDHACIPIKSDPVVSYRETVSESNVL CLSKSPNKHNLRYMKARFPDGLAEDID KGEVSARQELKQRARYLAKEYEWDVAE ARKIWCFGPDGTGPNILTDITKGVQYLN EIKDSVVAGFQWATKEGALCEENMRGV RFDVHDVTLHADAIHRGGGQIIPARRC LYASVLTAQPRLMEPTYLVEIQCEQVVG GIYGVNLNRKRGHVFEESQVAGTPMFVV KAYLPVNESFGFTADLRSNTGGQAFQC VFDHWQILPGDPFDNSSRPSQVVAETRK RKGLKEGIPALDNFLDKL
8035	16086	A	983	1326	1498	
8036	16087	A	984	60	966	RRRNSDGNACQPATHLLLSARFITGHGQ KLKSELKKTQVIMLNIQKVRIPTRDGY NEKDILSTGKNVEKLELSNIAGYPSNIEK KEYQEQSLSCCSERKDANPKSVVCSFF MQEQCTKGEKRLIPGTLSDRHLRYFG ILPTVSNAAVVKEVPTVSNAAVVTEAPT GSNAAVVTEAPTGSNAARVMEVPTGSN AAVVTEVPTGSNAAVVTEAPTGSNAAV VKEAPTGSNAARVMEVPTGSNAAVVKE APTGSNAARVMEVPTGSNAAVVKEVPT GSNAAVVKEVPTGVTLRWSRKRPRE
8037	16088	A	985	1393	1625	
8038	16089	A	986	358	475	
8039	16090	A	987	232	329	
8040	16091	A	988	127	461	
8041	16092	A	989	562	897	
8042	16093	A	99	62	1548	PLKAKMGKEKTHINIVVIGHVDSGKST TTGHLIYKCGGNDKRTIEKFEKEAAEM GKGSFKYAWVLDKLKAERERGITTDISL WKFETISKYYYVD*SLIAPGHQETFIQKH DLQGTSQGLAWFGGPPFWGGSPLIVAAI GVVGEF*SLVSPKNGADPTKHALLGLHT GVWKQTKLFGVNKNWIST*/EPPYSPEED IEGNC*GKVSTYIKKIGYNPDTSSILCPIS GWNGDNMLEPSPNMPWFQDGKVT KDGNASGTTLEALDCILPPTRPDKPLG LPLQDVYKIGGIGTPVGRVETGVLKPG MVVTFGPVNVTTTEVKSVMHEALGEA LPGDNVGFNVKNVSVKDVRGRNVAGDS KNDPPMEAAGFPAQVILNHPGQISAGY APVLDCHTAHIACKFAELKEKIDRRSGK KLEDGPKFLKSGDAAIVDMVPGKPMCV ESFSDYPPLGCFVRDMRQTVAVGVIKA VDKKAAGAGKVTKSAQAQKAK
8043	16094	A	991	7	494	
8044	16095	A	992	206	357	

8045	16096	A	993	1	101	
8046	16097	A	994	256	407	
8047	16098	A	995	254	432	
8048	16099	A	996	249	400	
8049	16100	A	997	37	465	
8050	16101	C	998	127	216	MRLRKQAEKNVEKKIDKYTEVLKTHGL LV*
8051	16102	A	999	1	1258	LFLPLLEPGERRGLLYRSRPGGAVAILL AAAVSICAVSQHAPPWTEDCRKSTYPPS RPTYRGAVPWDTIQCLTYHPYKRWHEL MLDKAPV/LQKVIVNSLKNMINTFVPSG KIMQVVDEKLAPGLLGNFPGPFEEEMKG IGRCLLDIPLGEIISFNIFYELFTICTSIVA EDKKGHLIHGRNMDFGVFLVWNINND TWVITEQLKPLTVNLDFQRNNKTVFKAS SFAGYVGMLTGFKPGLFSLTLNERFSIN GGYLGILEWILGKKDAMWIGFLTRTVLE NSTSYEEAKNLLTKTKILAPAYFILGGNQ SGEGCVITRDRKESLDVYELDAKQGRW YVVQTNYDRWKHPFFLDDRRTPAKMCL NRTSQENISFETMYDVLSTKPVLNKLTV YTTLIDVTKGQFETYLRDCPDPCIGW

WHAT IS CLAIMED IS:

1. An isolated polynucleotide comprising a nucleotide sequence selected from the group consisting of SEQ ID NO: 1-8051, a mature protein coding portion of SEQ ID NO: 1-8051, an active domain of SEQ ID NO: 1-8051, and complementary sequences thereof.
2. An isolated polynucleotide encoding a polypeptide with biological activity, wherein said polynucleotide hybridizes to the polynucleotide of claim 1 under stringent hybridization conditions.
3. An isolated polynucleotide encoding a polypeptide with biological activity, wherein said polynucleotide has greater than about 90% sequence identity with the polynucleotide of claim 1.
4. The polynucleotide of claim 1 wherein said polynucleotide is DNA.
5. An isolated polynucleotide of claim 1 wherein said polynucleotide comprises the complementary sequences.
6. A vector comprising the polynucleotide of claim 1.
7. An expression vector comprising the polynucleotide of claim 1.
8. A host cell genetically engineered to comprise the polynucleotide of claim 1.
9. A host cell genetically engineered to comprise the polynucleotide of claim 1 operatively associated with a regulatory sequence that modulates expression of the polynucleotide in the host cell.
10. An isolated polypeptide, wherein the polypeptide is selected from the group consisting of:
 - (a) a polypeptide encoded by any one of the polynucleotides of claim 1; and
 - (b) a polypeptide encoded by a polynucleotide hybridizing under stringent conditions with any one of SEQ ID NO: 1-8051.
11. A composition comprising the polypeptide of claim 10 and a carrier.
12. An antibody directed against the polypeptide of claim 10.

13. A method for detecting the polynucleotide of claim 1 in a sample, comprising:
- a) contacting the sample with a compound that binds to and forms a complex with the polynucleotide of claim 1 for a period sufficient to form the complex; and
 - b) detecting the complex, so that if a complex is detected, the polynucleotide of claim 1 is detected.
14. A method for detecting the polynucleotide of claim 1 in a sample, comprising:
- a) contacting the sample under stringent hybridization conditions with nucleic acid primers that anneal to the polynucleotide of claim 1 under such conditions;
 - b) amplifying a product comprising at least a portion of the polynucleotide of claim 1; and
 - c) detecting said product and thereby the polynucleotide of claim 1 in the sample.
15. The method of claim 14, wherein the polynucleotide is an RNA molecule and the method further comprises reverse transcribing an annealed RNA molecule into a cDNA polynucleotide.
16. A method for detecting the polypeptide of claim 10 in a sample, comprising:
- a) contacting the sample with a compound that binds to and forms a complex with the polypeptide under conditions and for a period sufficient to form the complex; and
 - b) detecting formation of the complex, so that if a complex formation is detected, the polypeptide of claim 10 is detected.
17. A method for identifying a compound that binds to the polypeptide of claim 10, comprising:
- a) contacting the compound with the polypeptide of claim 10 under conditions sufficient to form a polypeptide/compound complex; and
 - b) detecting the complex, so that if the polypeptide/compound complex is detected, a compound that binds to the polypeptide of claim 10 is identified.
18. A method for identifying a compound that binds to the polypeptide of claim 10, comprising:

a) contacting the compound with the polypeptide of claim 10, in a cell, under conditions sufficient to form a polypeptide/compound complex, wherein the complex drives expression of a reporter gene sequence in the cell; and

b) detecting the complex by detecting reporter gene sequence expression, so that if the polypeptide/compound complex is detected, a compound that binds to the polypeptide of claim 10 is identified.

19. A method of producing the polypeptide of claim 10, comprising,

a) culturing a host cell comprising a polynucleotide sequence selected from the group consisting of a polynucleotide sequence of SEQ ID NO: 1-8051, a mature protein coding portion of SEQ ID NO: 1-8051, an active domain of SEQ ID NO: 1-8051, complementary sequences thereof and a polynucleotide sequence hybridizing under stringent conditions to SEQ ID NO: 1-8051, under conditions sufficient to express the polypeptide in said cell; and

b) isolating the polypeptide from the cell culture or cells of step (a).

20. An isolated polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NO: 8052-16102, the mature protein portion thereof, or the active domain thereof.

21. The polypeptide of claim 20 wherein the polypeptide is provided on a polypeptide array.

22. A collection of polynucleotides, wherein the collection comprises the sequence information of at least one of SEQ ID NO: 1-8051.

23. The collection of claim 22, wherein the collection is provided on a nucleic acid array.

24. The collection of claim 23, wherein the array detects full-matches to any one of the polynucleotides in the collection.

25. The collection of claim 23, wherein the array detects mismatches to any one of the polynucleotides in the collection.

26. The collection of claim 22, wherein the collection is provided in a computer-readable format.

27. A method of treatment comprising administering to a mammalian subject in need thereof a therapeutic amount of a composition comprising a polypeptide of claim 10 or 20 and a pharmaceutically acceptable carrier.

28 A method of treatment comprising administering to a mammalian subject in need thereof a therapeutic amount of a composition comprising an antibody that specifically binds to a polypeptide of claim 10 or 20 and a pharmaceutically acceptable carrier.

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